The Internship Imperative

Expanding the On-Ramp to Career Success



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THE burningglass INSTITUTE

Author Credits and Acknowledgments

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Executive Summary

Internships have become the crucial launchpad from college to career in the United States. What once functioned as supplemental work experience now operates as core hiring infrastructure that shapes not just where graduates start, but the longer-term trajectory and momentum of their careers. Students who complete at least one internship are approximately 3 percentage points more likely to be employed one, three, and five years after graduation, half as likely to be underemployed, and seven percentage points more likely to work in roles aligned with their field of study.

The benefit for employers is equally direct. In roles and sectors in which structured internship programs are prevalent, roughly half of interns go on to become full-time hires—and around three-quarters at major professional services firms—proving that these programs are increasingly a key pipeline for entry-level hiring. In much of the economy, the internship has become the interview that lasts a summer.

But access to this advantage is far from universal. Internship participation remains sharply stratified by institution type and socioeconomic background. Students at well-resourced four-year institutions are far more likely to secure positions than their peers at community colleges or under-resourced regional schools.

On the employer side, the gaps are just as stark. In the best-connected industries, employers post roughly two to four entry-level roles for each internship opportunity advertised; in the least-connected, the ratio of entry-level roles to internships exceeds 40 to 1. Small and mid-sized firms, which employ nearly half of the private-sector workforce, generate just 13% of all internship postings. The question is whether the economy can afford a talent engine that only fires for the well-resourced firm and the privileged student.

The conventional analysis of the internship gap focuses on students: who participates and what outcomes follow. But the real bottleneck is not a lack of student ambition. And despite a recent slowdown in hiring in certain sectors, neither is it a lack of entry-level jobs. It is a lack of pipeline: the structured systems that employers design, or fail to design, to identify and develop early-career talent.

Unlike previous research, this report delves deeply into that gap from the demand side. To measure this, we introduce the **entry-level-to-internship ratio**, a simple but revealing diagnostic that identifies exactly where pipeline gaps are largest.

Nationally, employers post 9.9 entry-level roles for every internship. In sectors where internships genuinely function as a hiring pipeline, we see rough parity. In fields like Software Publishers (3.7 entry-level jobs : 1 internship), for example, internships are structurally embedded in how employers fill roles.

Where the ratio diverges sharply, internships stop functioning as pipelines altogether. At newspaper and magazine publishers, internships are scarce, with just one internship posted for approximately 22 people hired into entry-level roles.

This fragmentation is driven by both structural constraints, such as the decentralized nature of certain industries, and strategic choices, like employers opting for just-in-time hiring over long-term talent

development. Ultimately, the bottleneck in these high-gap sectors is not a lack of hiring. It is that employers have not built the structured pathways for qualified students to fill the entry-level roles they do have.

Our Skill Overlap × Conversion Matrix reveals that some industries have invested deliberately in this architecture, designing internships as rigorous hiring pipelines. Others treat internships as ad hoc arrangements, or simply as a source of seasonal labor. This strategic gap is compounded by structural barriers: large firms with centralized recruiting functions can build pipelines efficiently, whereas small and mid-sized employers face prohibitive fixed costs. Again, despite employing half the U.S. workforce, these small and mid-sized firms produce barely one in eight internship postings.

For employers caught on the wrong side of this divide, the pipeline gap is a severe competitive disadvantage. Firms with structured programs fill entry-level roles with candidates they have evaluated over months. Those without them are making the same hires based on a resume and a few interviews. The cost of that information asymmetry shows up in expensive onboarding, early attrition, and talent lost to competitors who got there first.

Because the pipeline gap is structural in origin, its solution must also be structural. Sectors with a mature pipeline (including accounting, professional services, scientific R&D, and architectural and engineering services) already operate at an average of roughly six entry-level positions per internship. Benchmarked against that standard, the U.S. economy is short an estimated 1.5 million internships per year. The greatest structural gap lies with small and mid-sized employers: if these firms matched the pipeline density of their larger counterparts in pipeline-mature sectors, that alone would generate an estimated 500,000 to 780,000 new internship positions.

Expansion at this scale would not simply layer new opportunities on top of a fixed entry-level market. The volume of entry-level work is finite, and some roles now posted as entry-level jobs would likely move upstream into internships and conversion pathways. That shift carries real trade-offs, but on balance it points toward a more efficient labor market: although students might have fewer entry-level openings to compete for, they would have a better shot at the ones that remain and far better preparation when they step into them; employers, in turn, would fill more requisitions with known, de-risked talent rather than unknown applicants – and would be more willing to consider new entrants to the job market rather than experienced hires.

Closing a gap of this magnitude requires coordinated action, and what is required differs by scale. Large employers can integrate internship pathways into existing entry-level hiring at relatively low incremental cost. For small and mid-sized firms, the economics are harder: the supervisory and administrative burden of a single intern falls far more heavily on a 30-person company than a 3,000-person one. That is precisely where institutions and regional coalitions can intervene, pooling capacity across multiple small employers to lower the per-firm cost of participation. Policymakers, in turn, can target incentives toward the sectors and geographies where entry-level-to-internship ratios are highest, directing resources where pipeline investment is most needed and least likely to emerge on its own.

Internships already function as the most effective mechanism for connecting education to employment. The infrastructure to make that true for the broader economy is not yet built. This report provides that blueprint.

Introduction

Today, the U.S. economy generates around 3.6 million collegiate internships annually, according to estimates by the Business-Higher Education Forum (BHEF).[1] However, set against a total U.S. higher-education enrollment of roughly 18 million students, the systemic lack of supply becomes immediately apparent. Even accounting for students who are not actively seeking these roles, survey data consistently shows that student demand vastly outstrips the available opportunities. While this aggregate shortfall highlights a severe structural gap, these high-level figures also mask profound variation in how internships are distributed, whom they serve, and how they function across different sectors of the economy.

To understand the internship gap, we must look beyond student participation and examine the market from the employer side. The central constraint is not insufficient student demand, but the limited extent to which employers have built scalable internship pipelines relative to their own hiring needs.

To build that case, this report draws on more than 65 million career histories, linking them to educational records, and placing them alongside hundreds of millions of job postings. We focus on associate and bachelor's degree recipients who graduated between 2016 and 2023. The scale of the data makes it possible to examine internship markets not just as collections of individual outcomes but as structural systems disaggregated by industry, employer size, geography, and institution type. This is a level of detail not previously available in the research literature.

Two analytical tools developed from that data run throughout the report: the entry-level-to-internship ratio, which measures the gap between an industry's hiring demand and its pipeline investment; and the Internship Skills Overlap × Conversion Matrix, which reveals how different industries actually use their internship programs. Together, they make it possible to move from describing where the internship gap exists to explaining why and identifying the interventions most likely to close it.

The report proceeds in five sections. Section 1 describes how internships have evolved from supplemental learning experiences into core hiring infrastructure and establishes the analytical framework used throughout. Section 2 documents the durable career advantages associated with internship participation. Section 3 analyzes the structural causes of internship market imbalances across industries, geographies, employer sizes, and institution types. Section 4 examines the consequences of those imbalances for students and employers alike. Section 5 translates the diagnosis into a blueprint for action.

Brief Methodology

This report analyzes internship supply, demand, and labor-market outcomes at an unprecedented scale. Drawing on more than 65 million career histories and hundreds of millions of job postings, the analysis focuses on associate and bachelor's degree recipients who graduated between 2016 and 2023. To accurately capture these experiences, we employ a multi-step classification approach that identifies internships occurring during college or within one year of graduation.

The analysis tracks several observable early-career outcomes—including employment, underemployment, occupational alignment, and internship-to-employment conversion—measured at one, three, and five years after graduation. Full technical details, including classification rules, data construction, and regression specifications, are provided in the Appendix.

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Section 1: The Challenge: A Stable but Unequal Internship Market

The modern internship has undergone a quiet but profound transformation. What was once a supplemental summer learning experience has evolved into a high-stakes, highly structured gateway to professional employment. Yet, while the overall market for these roles remains robust, it is deeply unequal. The rules of engagement, the likelihood of securing a full-time offer, and the very purpose of the internship vary dramatically depending on the industry. To understand why the broader internship gap persists, we first must look at how employers deploy these programs today.

This section introduces two diagnostics that run throughout the report. The first, the Internship Skills Overlap × Conversion Matrix, shows how different industries use internships: whether they function as job auditions, selective screening mechanisms, talent incubators, or disconnected episodic experiences. The second, the entry-level-to-internship ratio, shows where internship pipelines are underbuilt relative to employers' own entry-level hiring demand.

Together, these tools shift the analysis from a simple question of whether students participate in internships to a more actionable question: where have employers built structured pathways into early-career jobs, and where have they not?

Internships Today as Embedded Hiring Infrastructure

The value employers place on internship programs is measurable. Today, wide swaths of internships increasingly resemble entry-level roles in both responsibilities and required skills, enabling employers to treat the internship period as a low-risk audition for permanent employment. Among 461 large U.S. employers, the average skill overlap between internship postings and entry-level job postings is 25.5%, a rate higher than the measured skill overlap between two full-time software developers at competing firms (22.4%).

That figure is worth pausing on. The direct implication is that the skills an employer requires of an intern are, on average, more similar to its own entry-level requirements than to what a competing firm requires of a comparable full-time role. Put differently, an employer is statistically more likely to find the specific skill profile it wants in someone who has interned at the firm than in someone working in a similar role elsewhere.

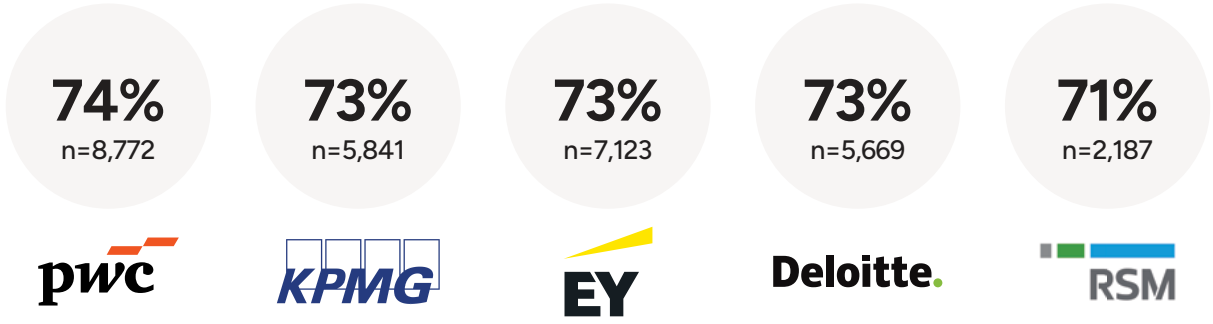
While the data does not explicitly capture employer intent, this high degree of alignment strongly implies a deliberate strategy among employers. Plausibly, because traditional signals like resumes and transcripts signal potential but reveal little about day-one job readiness, employers design internships to mirror the actual job so they can observe performance directly, accelerating the talent-filtering process and limiting the risk of a bad hire, such as the candidate who looks strong on paper but struggles in practice.

For strategic-minded employers, the internship therefore solves one of the central problems in entry-level hiring: uncertainty. A conventional entry-level hire is usually selected on the basis of a resume, transcript, and a handful of interviews whereas a converted intern has been observed over weeks or months, often

while performing work similar to the full-time role. That gives employers better information about technical readiness, reliability, communication, teamwork, and fit. It also gives interning students a more realistic view of the work before committing to a full-time path.

The payoff is measurable on the conversion side as well. At large firms broadly, roughly half of interns convert to full-time roles. In consulting and accounting, as well as other structured professional services, conversion rates approach 75%. In these relatively mature internship markets, these are not supplemental programs that run adjacent to hiring pipelines. They are a central part of hiring strategy itself.

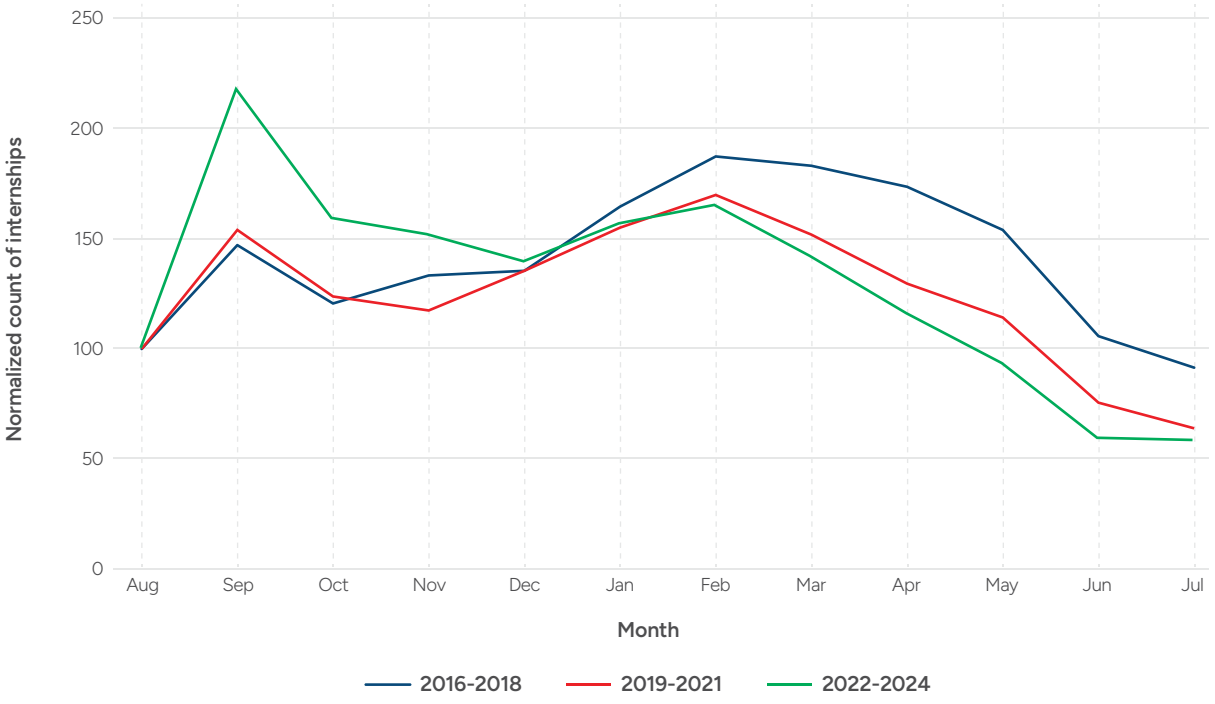
Figure 1: Conversion Rates from Internship to Full-Time Offer at Major Consulting and Accounting Firms Are Particularly High



Source: Burning Glass Institute analysis

This transformation of the internship into a core hiring mechanism has raised the competitive stakes for students and employers alike. Unlike pre-pandemic, when internship postings peaked in late winter or early spring, internship postings in recent academic years peak in early fall, compressing the timeframe for students to secure a spot on the runway for career launch.

Figure 2: Internship Postings by Month (August 2015-2024)



Source: Burning Glass Institute analysis

The stakes are not uniform. Internship markets operate under fundamentally different rules depending on the industry. Mapping that variation reveals where the system is working, where it is only partially working, and where it is not working at all.

A Market with Different Rules: The Skill Overlap x Conversion Matrix

Skill overlap and conversion rates vary considerably across industries, and they do not always move together. To organize these patterns, this report introduces the Internship Skills Overlap × Conversion Matrix, which categorizes industries according to two measurable dimensions: how closely internship skill requirements resemble entry-level job requirements, and how often internships lead to full-time employment.

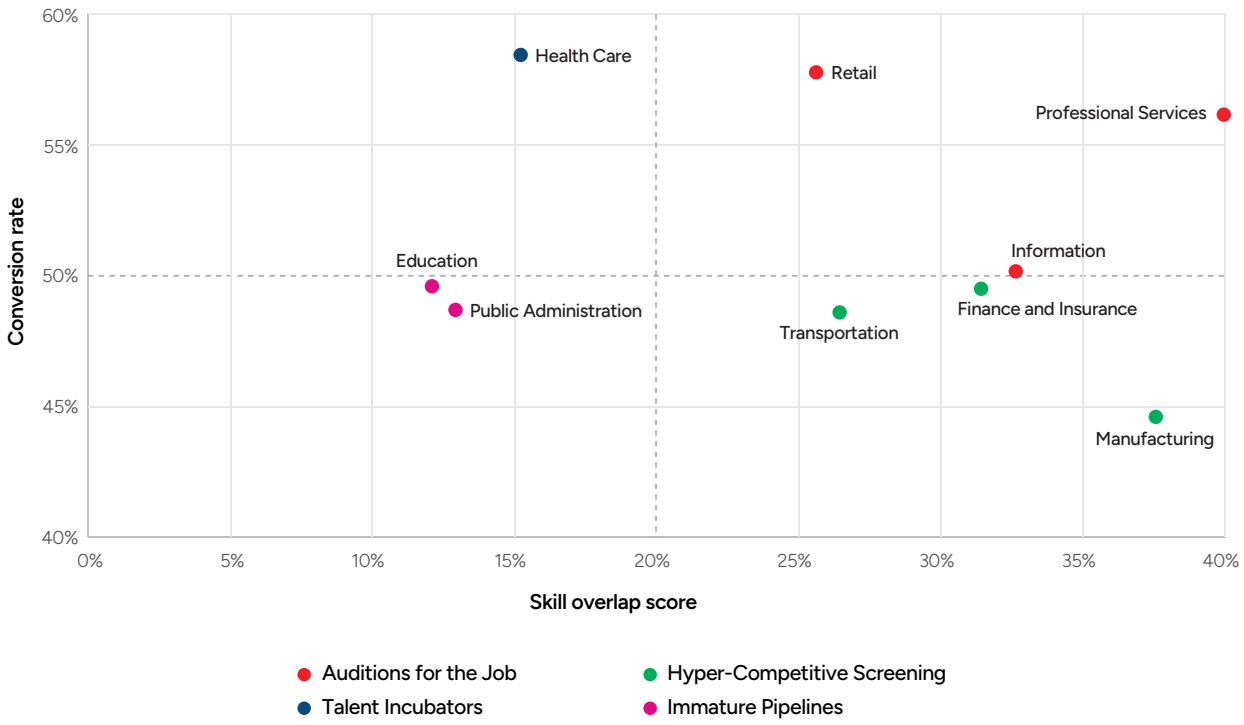
The two measures capture different functions of an internship. Skill overlap captures its developmental content: whether the work students are asked to do resembles the work expected of entry-level employees. Conversion captures its hiring function: whether the experience is connected to a subsequent job. An internship with high skill overlap but low conversion may prepare students well without giving them a clear path into employment, while an internship with high conversion but low skill overlap may help students get hired without necessarily preparing them for the specific work of the entry-level role.

By plotting these two dimensions against each other, the matrix provides a high-level conceptual map of how different types of employers utilize internships. It reinforces a central theme of this report: the internship market is a collection of distinct talent strategies that shape early-career pathways in fundamentally different ways.

It is important to note that the industry-level data mapped here is drawn from among the largest companies within each sector, rather than an aggregate of every employer in the industry. Focusing on these major employers helps illuminate the dominant, scaled talent strategies that drive the broader market, recognizing that Fortune 500 companies often utilize internships very differently than small or mid-sized businesses.

Figure 3 maps industries by skill overlap and conversion, showing four broad archetypes of internship function. Skill overlap measures the similarity between internships and entry-level roles, with 0 being no overlap in skills and 100 being perfect overlap in skills.

Figure 3. Overlap vs. Conversion by Major Industry



Source: Burning Glass Institute analysis

These dimensions define four distinct archetypes of employer behavior:

Auditions for the Job (high overlap, high conversion)

- Employers in this category typically rely on structured, highly competitive internship programs as a critical engine for early-career talent acquisition, functioning as an extended, high-stakes interview for full-time employment.

- Conversion is the expected outcome, with employers treating internships as a pathway where successful interns are expected to return as full-time employees.
- Because interns are performing many of the actual tasks required of entry-level hires, companies can accurately evaluate both technical competence and cultural fit in a real-world setting before making a permanent offer.
- For students, these opportunities represent the most direct and coveted on-ramps to a career, offering a seamless transition into the workforce.
- Professional Services, which includes consulting and accounting, is the clearest example.

Hyper-Competitive Screening (high overlap, selective conversion)

- Employers in this category use internships to attract top-tier talent for specialized, rigorous project work, but do not necessarily design their programs to absorb the majority of the intern class into full-time roles.
- Conversion is highly selective rather than the default expectation, with full-time offers reserved for a small fraction of the cohort or heavily dependent on fluctuating, just-in-time headcount availability.
- Because interns are engaging in complex, role-specific tasks that closely mirror entry-level technical work, companies use this period to identify the absolute highest performers while benefiting from their immediate project contributions.
- For students, these opportunities provide highly valuable, portable skill development and a prestigious resume boost, equipping them with strong occupational preparation even if they ultimately take those skills to a different employer upon graduation.
- Manufacturing, particularly in the high-tech, defense, and aerospace sub-sectors, is the clearest example.

Talent Incubators (lower overlap, high conversion)

- Employers in this category utilize internships as high-volume talent pipelines designed to bring early-career professionals into the organization, prioritizing broad institutional fit over specific technical prerequisites.
- Conversion is a primary goal, with employers heavily invested in retaining interns and routing them into various operational, administrative, or management-track roles within the enterprise.
- Because the day-to-day internship tasks may not directly mirror the specific technical duties of their eventual entry-level roles, employers use this period to evaluate mission alignment, reliability, learning agility, and general professional aptitude.
- For students, these opportunities offer a reliable, accessible gateway into stable employment and long-term career growth within large organizations, even if the initial internship work is more generalized.
- Health Care is the lone example among our sample of major industries.

Immature Pipelines (low overlap, low conversion)

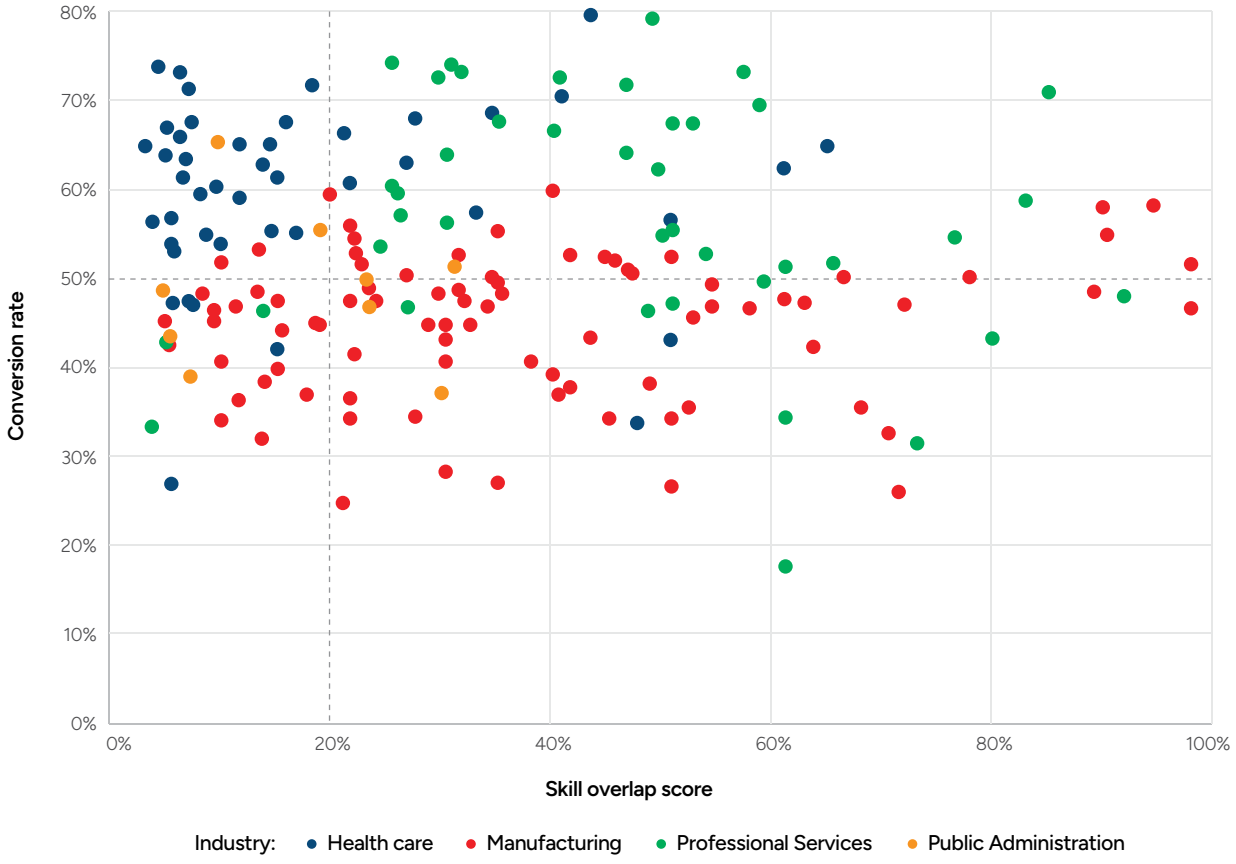
- Employers in this category may host internships to provide generalized work experiences, support short-term operational needs, or fulfill community-engagement goals, rather than as formalized pipelines for entry-level hiring.

- Conversion is relatively rare, as these organizations typically hire entry-level talent on an as-needed, ad-hoc basis rather than relying on structured internship cohorts to fill future headcounts.
- Because interns are often assigned generalized support tasks, rotational shadowing, or administrative duties rather than the specific work of a target entry-level job, the focus is often on broad industry exposure rather than rigorous technical evaluation.
- For students, these opportunities can serve as valuable introductory experiences to build basic professional skills, explore an industry's culture, and expand their networks before committing to a specific, specialized career path.
- Public Administration and Educational Services are representative industries.[2]

Employer-Level Examples from Case-Study Industries

The industry-level matrix summarizes broad patterns, but it can mask important variation within sectors. Employer-level examples from four case-study industries show how the same quadrant logic plays out across individual organizations. These examples are not intended to rank employers; they illustrate how different employers use internships as hiring pipelines, screening mechanisms, feeder systems, or developmental experiences.

Figure 4. Internship Conversion vs. Skill Overlap Within Select Industries



Source: Burning Glass Institute analysis

In Professional Services, employer-level data reinforce the "Auditions for the Job" model. Major accounting and advisory firms convert interns at consistently high rates, generally around 70% to 74%. McKinsey, PricewaterhouseCoopers, Grant Thornton, KPMG, Ernst & Young, Deloitte, Moss Adams, and RSM all fall in this range. Skill overlap varies across these employers, but the consistently high conversion rates suggest that internships in this sector often function as formalized extensions of the entry-level recruiting system.

In Manufacturing, the pattern is more consistent with "Hyper-Competitive Screening." Several large manufacturers show relatively high skill overlap but more selective conversion. Intel, Motorola Solutions, Nvidia, Apple, and Lockheed Martin all combine high skill overlap (with scores ranging from 90 to 98) with conversion rates ranging from roughly 46% to 58%. These internships may expose students to work that closely resembles entry-level technical roles, but full-time offers remain more selective. For students, such internships can provide valuable and portable skill development even when they do not reliably convert into a job with the same employer.

Major Health Care employers tend to exhibit the "Talent Incubators" pattern more consistently. More than half of the employers in our sample convert interns at high rates despite relatively low measured skill overlap, suggesting that many healthcare internships may function as high-volume feeder systems into administrative, operations, or clinical support pathways, even when the stated skills in internship postings do not closely resemble those in entry-level job postings. For example, DaVita, Corewell Health, Nationwide Children's Hospital, and Henry Ford Health have conversion rates ranging from 65% to 74%, with overlap scores of 6 or lower. However, a few major employers in this industry fall outside this archetype. AdventHealth and Mercy Health also stand out for embracing different entry-level hiring models, combining high conversion (60%+) with high measured skill overlap (60+), suggesting an "Auditions for the Job" talent strategy. Four-fifths of Labcorp internships convert to full-time employment, and the firm has a relatively high skill overlap score (44).

At the industry level, Public Administration registers as an "Immature Pipeline." Yet company-level data suggests a more deliberate strategy among some major employers. The Department of Justice, State of California, and National Park Service convert interns at solid rates (51%–65%) despite low skill overlap (scores of 10–31). This reflects a "Talent Incubator" model: rather than testing specific technical skills, these organizations use internships to evaluate mission fit, learning agility, and readiness for public-sector work.

Ultimately, these employer-level case studies reveal that the traditional metrics of internship "success" are highly context-driven. The data challenge the assumption that a perfect internship must simultaneously offer rigorous technical alignment and guaranteed employment. Instead, market leaders deliberately decouple these elements to serve their specific workforce needs—whether that means over-indexing on technical overlap to ruthlessly filter for elite talent in manufacturing, or prioritizing retention and mission-fit in public administration. Recognizing these distinct models shifts the conversation from asking whether an internship program is "good" to asking what specific talent problem it was designed to solve.

These employer-level examples also point to the next layer of variation that the present analysis cannot fully observe: occupation. The same industry, and even the same employer, may use internships differently across role families. Some internships may be designed as auditions for specialized technical roles, while others may serve as high-volume pipelines into operations, administration, clinical support, store leadership,

or other generalist pathways. Occupation-level analysis would help distinguish true skill mismatch from deliberate pipeline design: in some cases, low measured skill overlap may indicate that internships are poorly aligned with entry-level hiring; in others, it may reflect an intentional strategy to recruit for different career pathways than those captured in the comparison set.

Beyond the Averages: What the Matrix Reveals

The case-study industries illustrate a broader point: the matrix is not a simple ranking from "good" to "bad." Each quadrant represents a different talent strategy, and each implies a different improvement priority.

In "Auditions for the Job" sectors, the key challenge is often access: who gets into the pipeline in the first place? In "Hyper-Competitive Screening" sectors, the challenge is conversion: how can employers turn strong skill-building experiences into more reliable job pathways? In Talent Incubator sectors, the priority is strengthening developmental content and guarding against informal gatekeeping. In "Immature Pipeline" sectors, the most basic need is infrastructure: internships are neither closely aligned to entry-level work nor consistently connected to jobs.

This is why the combination of skill overlap and conversion is more useful than either metric alone. Conversion by itself can tell us whether interns are being hired, but not whether the internship prepares them for the work—especially important for those interns who don't receive a full-time offer. Skill overlap can tell us whether internship postings resemble entry-level job postings, but not whether employers use the experience as a hiring pathway. Together, the two measures show whether internships are functioning as workforce infrastructure, screening mechanisms, feeder systems, social-capital gateways, or disconnected experiences.

The skill-overlap measure should also be interpreted carefully. High measured overlap suggests that an internship may serve as a closer proxy for entry-level work, giving students exposure to competencies likely to matter in full-time roles. In some cases, low measured overlap suggests that interns are being assigned low-value tasks that do little to help them build job readiness. However, low measured overlap should not automatically be read as evidence of low-quality work. In sectors with rotational programs, public-sector pathways, clinical or educational placements, or management tracks, internship postings may emphasize eligibility, mission fit, location, or leadership potential more than the specific skills listed in entry-level job ads.

A high-functioning internship market, then, is not defined solely by the number of internships available, but also by the function and substance of those programs. Do they teach skills that matter? Do they connect to jobs? Do they expand access to students who would otherwise lack professional networks? Do they help employers identify and develop talent more effectively than just-in-time hiring? The matrix provides the framework to answer these questions.

As Figure 3 illustrates, the matrix shows how internships function where they exist. But it does not show whether internships exist at scale. For that, the analysis turns to a second diagnostic: the entry-level-to-internship ratio.

Quantifying the Gap: Entry-Level to Internship Ratios

The entry-level-to-internship ratio answers a practical question: how many entry-level jobs exist for every internship? (For this metric, we define an entry-level role as requiring a bachelor's degree and zero years of experience). Ultimately, this ratio shows how heavily an industry relies on internships to build its workforce. A low ratio means employers use internships as a core strategy to find and train junior talent. A high ratio means they post plenty of entry-level jobs but offer very few internships, relying instead on direct, just-in-time hiring.

The ratio is not a claim that every entry-level job should be preceded by an internship. Nor does it prove that every high-ratio industry could immediately build large-scale internship programs. Some sectors face regulatory constraints, supervision requirements, safety concerns, fragmented employer structures, or alternative work-based learning models.

But the ratio is a powerful diagnostic because it identifies where entry-level demand already exists, yet structured internship pathways remain thin. In other words, it shows where the economy is hiring new talent without building enough on-ramps for them.

Nationally, the data show approximately 9.9 entry-level roles offered for every internship. However, this average obscures massive variance across both industries and geographies. In highly internship-dense fields, early-career pathways are highly accessible. Sectors such as Vocational Rehabilitation Services (1.6:1) and Communications Equipment Manufacturing (2.2:1) operate near parity, meaning internships are nearly as common as entry-level roles.

Figure 5. Industries with the Highest Internship Density

Industry	Entry-Level Roles per Internship
Vocational Rehabilitation Services	1.6
Communications Equipment Manufacturing	2.2
Semiconductor & Electronic Component Manufacturing	3.2
Resin / Synthetic Rubber Manufacturing	3.4
Electric Power Generation, Transmission and Distribution	3.5
Computer and Peripheral Equipment Manufacturing	3.5
Automotive Equipment Rental and Leasing	3.8
Motor Vehicle Parts Manufacturing	4
Business Support Services	4.1

Source: Burning Glass Institute analysis

These low-ratio industries are not identical, and they do not all use internships in the same way. But they share one important feature: internships are present at a scale that makes them visible within the early-career labor market. In such sectors, internships are not merely occasional one-off experiences. They are part of the infrastructure through which at least some employers manage early-career talent.

At the other end of the spectrum, six of the 10 industries with the highest ratios are healthcare-related. The data implies that these specific healthcare gaps are often role-specific rather than sector-wide; clinical training pathways may be well-developed, while adjacent non-clinical roles, such as operations, IT, billing, compliance, and administration, rely on traditional entry-level hiring with far less internship infrastructure.

Figure 6. Industries with the Lowest Internship Density

Industry	Entry-Level Roles per Internship
Home Health Care Services	45.1
Specialty Hospitals (except Psychiatric & Substance Abuse)	42.6
Special Food Services	29.9
Warehouse Clubs / Supercenters / General Merchandise Retailers	28.4
Misc. Durable Goods Merchant Wholesalers	25.4
Residential Care Facilities (Other)	24.3
Offices of Other Health Practitioners	24.0
Child Care Services	23.8
General Medical and Surgical Hospitals	23.2
Offices of Physicians	22.3

Source: Burning Glass Institute analysis

These high-ratio industries should be interpreted carefully. In some direct-care settings, supervision requirements, licensing rules, patient safety concerns, or the structure of the work may limit the number of roles that can appropriately be converted into conventional internships. But the high ratios still reveal a meaningful pipeline problem. Large sectors such as health care, retail, distribution, food services, and wholesale trade employ substantial numbers of entry-level workers. If internships are almost absent relative to that hiring demand, students lose a structured path into those roles and employers lose the opportunity to evaluate and prepare talent before hire.

Yet, even when excluding healthcare to account for clinical anomalies, the data show a long tail of limited internship infrastructure across retail, distribution, food services, and wholesale sectors. Industries like Special Food Services (29.9:1), Warehouse Clubs / Supercenters / General Merchandise Retailers (28.4:1), and Miscellaneous Durable Goods Merchant Wholesalers (25.4:1), offer only a fraction of the internships needed to support their entry-level hiring volume.

Figure 7. Non-Healthcare Industries with the Lowest Internship Density

Industry	Entry-Level Roles per Internship
Special Food Services	29.9
Warehouse Clubs / Supercenters / General Merchandise Retailers	28.4
Misc. Durable Goods Merchant Wholesalers	25.4
Newspaper, Periodical, Book, and Directory Publishers	21.9
Department Stores	21.3
School and Employee Bus Transportation	19.7
Building Material & Supplies Dealers	19.3
Management, Scientific, and Technical Consulting Services	18.6
Media Streaming, Social Networks, and Other Content Providers	18.2
Legal Services	17.9

Source: Burning Glass Institute analysis

The practical implication is not that every warehouse, food service, or health care role should become an internship. Rather, these ratios suggest that many sectors with large entry-level workforces have not systematically identified which early-career roles could be structured as internships. A hospital may have well-developed clinical placements but few pathways in operations or data analytics. A retailer may hire large numbers of entry-level workers but lack structured internship-based career pathways in supply chain, store management, merchandising, or human resources. A wholesaler may need early-career talent in logistics and sales operations but rely almost entirely on direct hiring. The opportunity is to convert some portion of existing entry-level demand into structured pathways that improve preparation, matching, and retention.

Furthermore, our analysis shows that these structural bottlenecks compound significantly at the state level, where regional industry mix amplifies the gaps, as we explore in more detail in Section 4. For example, the ratio for Grocery & Related Product Merchant Wholesalers is 10.2:1 nationally, but spikes to 319:1 in Montana and 258:1 in Idaho.

What the Ratio and Matrix Reveal Together

The ratio and the matrix are complementary. The ratio measures quantity: whether internships exist at sufficient scale relative to entry-level hiring. The matrix measures function: whether internships, where they exist, provide relevant preparation and connect to full-time employment. A sector can have a low ratio but still need to improve the quality of its internships. Conversely, a sector can have reasonably strong conversion among the few internships it offers while still leaving most entry-level hiring outside any structured pipeline.

Taken together, these measures drive a valuable diagnostic tool for addressing four distinct questions that employers, educators, and policymakers should ask when assessing any internship market:

- Is there enough internship supply relative to entry-level hiring demand?
- Do internships resemble the entry-level work students are preparing to enter?
- Do internships convert into full-time opportunities, either with the same employer or through strong market signaling?
- Are the benefits of these pathways broadly accessible, or concentrated among students and employers already positioned to participate?

Ultimately, the broader takeaway is not that internship markets differ in both density and design. Some sectors have built robust pipelines but need to broaden access. Some offer strong learning experiences but convert too few students. Some convert students but rely too heavily on informal judgments of fit. Others have not yet built internships into their hiring systems at all.

That variation highlights the principal challenge. The internship market is stable, but unequal; valuable, but only accessible to some; increasingly central to hiring, but still absent from many of the places where entry-level demand is strongest. The sections that follow document where those gaps are largest, explain why they persist, and identify what it would take to close them.

Section 2: Why it Matters for Students: The Durable Career Advantages of Internships

Section 1 highlighted the measurable benefits that firms accrue through structured internship programs, both in terms of recruitment and readiness. Ultimately, these benefits can only amplify. By treating the internship as an extended evaluation period, employers significantly reduce early-career attrition, lower post-hire training and onboarding costs, and mitigate the expensive risks associated with reactive, just-in-time hiring.

At the same time, these advantages are not limited to employers; they accrue equally to students. Internship participation is strongly associated with improved labor market outcomes across multiple dimensions and time horizons. The benefits are measurable, durable, and evident across degree levels, fields of study, and demographic groups.

Employment, Alignment, and Career Mobility

We find that students who complete at least one internship are approximately three percentage points more likely to be employed not only immediately after graduation but also over time. This effect holds across fields of study and demographic groups, indicating that internships offer not just a temporary boost for a select few, but also a broadly shared and durable advantage in the labor market.

Interns are 49% less likely than non-interns to be underemployed, meaning they are more likely to land jobs that require their degree and that utilize their skills and training.[3] This matters because underemployment is not a temporary condition for most graduates who enter it. Research on early-career labor markets shows that underemployment in the first year after graduation has lasting wage and occupational consequences, with workers who start in misaligned roles substantially less likely to reach full occupational alignment by mid-career.

This reduction in underemployment reflects better job matches: interns are seven percentage points more likely to work in occupations aligned with their field of study. For example, STEM majors who interned are 6.8 percentage points more likely to work in a field-aligned role one year after graduation, while liberal arts majors see an 8.0 percentage-point gain and business majors see the largest boost at 10.6 percentage points. The effect is remarkably consistent across most fields of study, with the notable exception of health majors, for whom alignment rates are already high and the internship effect is smaller. Early career trajectory can be difficult to correct, and the first job is often key to a successful career launch. The alignment advantage matters not only for early-career placement but also because prior research has linked early alignment to longer-term career outcomes.[4] [5]

Additionally, internship participants are roughly five percentage points more likely to be enrolled in graduate school a year after graduation, suggesting that these experiences may also encourage or facilitate further early-career academic pursuit, and the labor market advantages that come with it.

Figure 8. Internships Drive Students' Career Gains Beyond First Job

All outcomes calculated 1, 3, and 5 years post-graduation	
Employed	Interns are **~3 percentage points more likely to be employed** 1, 3, and 5 years post-graduation
Grad School	Interns are **~5 percentage points more likely to be enrolled in graduate school** at year 1, though this difference fades by years 3 and 5
Occupational alignment	Interns are **~7 percentage points more likely to be in an aligned occupation**, with the effect persisting at 3 and 5 years post-graduation
Company switch	Interns are **~7 percentage points more likely to switch companies** 3 and 5 years post-graduation

Source: Burning Glass Institute analysis

Longer-term career mobility data add another dimension. Internship participants are more likely to change employers within three to five years of graduation. While this might seem counterintuitive, this pattern is associated with positive rather than negative career trajectories in the early-career labor market. This finding suggests that students with internship experience enter the workforce with stronger professional networks, clearer self-assessments, and greater optionality. They possess the accumulated human and social capital required to navigate career transitions actively rather than simply endure them. Those who haven't interned, by contrast, are more likely to remain stuck in their first job, more likely suggesting limited alternatives than actual job satisfaction.

The Compounding Benefits and Career Mobility

Internships provide a clear advantage in the labor market, with students who complete at least one internship being 3 percentage points more likely to secure employment than their non-interning peers. This advantage compounds with experience; completing two or more internships increases the likelihood of employment by 6 percentage points. Beyond hiring rates, these students also experience lower rates of underemployment and stronger alignment between their jobs and fields of study.

This pattern suggests that internships function cumulatively rather than as a one-time credential boost. Each additional experience builds skills, expands professional networks, and signals persistence and adaptability to employers. For students navigating competitive fields, securing multiple internships is becoming less optional and more essential.

Figure 9: Interning More Than Once Amplifies Career Impact



Completing a second internship **nearly doubles the employment advantage** at 1, 3, and 5 years post-graduation



Graduates with 2+ internships are **60% more likely to secure a major-aligned job** than those with only one

Source: Burning Glass Institute analysis

Broad-Based, Not Concentrated

One potential objection to this line of analysis is that it reflects selection effects rather than the advantages conferred by the internship experience itself—that students who intern are simply more motivated, more credentialed, or better connected, and would have outperformed their peers regardless. Methodologically, this concern is real, and it is difficult to resolve fully with observational data. But the consistency of internship outcome advantages across degree levels, institutional types, and demographic groups is difficult to explain through selection alone.

However, while internships provide a clear and measurable benefit across all demographic groups, participation alone is not sufficient to close existing equity gaps. The data shows that internships provide a similar relative boost to both advantaged and disadvantaged students; because both groups experience a parallel lift in outcomes, the underlying disparities between them remain intact. Notably, however, when controlling for occupation selection, this outcome gap largely vanishes. This suggests that students from historically marginalized backgrounds are often sorting into internships in fields or roles that yield a lower overall return on investment, ultimately getting less leverage out of their internship experience in the broader labor market.

That last pattern points directly toward the access and equity questions that Section 4 addresses. But first, Section 3 examines the structural reasons why the supply of internships has not scaled to meet the evidence of their value, and why the shortage is most acute in exactly the places where the benefit would be greatest.

Section 3: The Employer Demand Problem: Where and Why Internships Don't Scale

The evidence in Section 2 establishes that internships produce durable, broadly distributed career benefits. That makes the dynamics of employer demand for interns all the more consequential. Despite considerable evidence of value to both students and employers, the internship market remains stubbornly undersized compared to the scale of entry-level hiring demand. Between 2022 and 2025, employers consistently posted roughly 9.9 entry-level roles, defined as those requiring a bachelor's degree and zero years of experience, for every one internship. This relative scarcity is not random. It is driven by three structural barriers: industry-level infrastructure, employer size, and geography. And, though these barriers are individually addressable, they severely restrict opportunity when they intersect.

Industry Architecture: A Market in Two Modes

While the entry-level-to-internship ratio documents the scale of the pipeline gap, it does not, on its own, explain why it exists. A ratio of 16-to-1 could reflect an industry where internships are genuinely difficult to structure, perhaps because the work is too complex, too regulated, or too distributed. Or it could reflect an industry that has simply never built the organizational infrastructure to make internships work. Distinguishing between the two matters, because each diagnosis points toward a fundamentally different solution.

The Internship Skills Overlap × Conversion Matrix, introduced in Section 1, helps narrow that question. Mapping industries along two measurable dimensions (i.e., how closely internship roles mirror entry-level jobs in required skills, and how frequently interns are subsequently hired into full-time positions) shows something the ratio cannot: whether the internships a sector already runs are built to resemble real jobs and lead to them. Where they are, thin overall supply looks less like a constraint than a choice.

The contrast between the matrix's two extreme quadrants is where the argument becomes clearest. In the Auditions for the Job quadrant, where skill overlap and conversion are both high, internships function as structured hiring pipelines with dedicated budgets, internal champions, and conversion metrics tracked at senior leadership level. Professional services, consulting, and accounting are the canonical examples. The Big Four accounting firms convert roughly three out of every four of their interns to full-time roles. Even the remaining quarter of interns who don't receive offers exit with highly industry-aligned skills, positioning them well for roles at peer firms, a dynamic we return to in Section 4.

That high conversion rate suggests a deliberate human capital strategy. These firms use internships as their primary way to identify and recruit entry-level talent, and they have built systems to execute that strategy. This includes practices like developing recruitment relationships with universities, creating structured eight-week programs with formal evaluation processes, and setting conversion targets, among others.

At the opposite extreme, the Immature Pipelines quadrant is defined not just by thin supply but also by disconnection from strategic intent. Skill overlap is low, signaling that intern work has not been designed to resemble actual entry-level roles. Conversion rates are low, signaling that the program lacks a defined purpose in the hiring cycle. Internships in these sectors tend to be ad hoc, dependent on individual supervisors rather than institutional programs. When the supervisor who built the program leaves, the program disappears. When budgets tighten, the internship line is cut without consequence, because there is no internal constituency measuring what the pipeline produces and no competitive pressure to sustain it.

The critical observation is what these two quadrants reveal about the sectors that occupy them. The Immature Pipelines quadrant is not disproportionately populated by industries with thin talent needs, simple operations, or work that cannot be structured for early-career learning. It includes Education and Public Administration, both industries with substantial and growing entry-level demand. The bottleneck is not the nature of the work. It is the absence of the organizational architecture that would make internship programs self-sustaining.

The two middle quadrants complete the picture. In Hyper-Competitive Screening sectors, such as Finance and Manufacturing, employers have built the infrastructure but use it as a filtering tournament: high skill overlap, selective conversion. The architecture is real; the output is a different kind of pipeline. In Talent Incubators, such as Health and Social Assistance, conversion rates are high despite low skill overlap. This is likely because employers are assessing potential and cultural fit rather than existing technical skills. The pipeline functions, but in ways that, as Section 4 discusses, can reinforce barriers for underrepresented candidates.

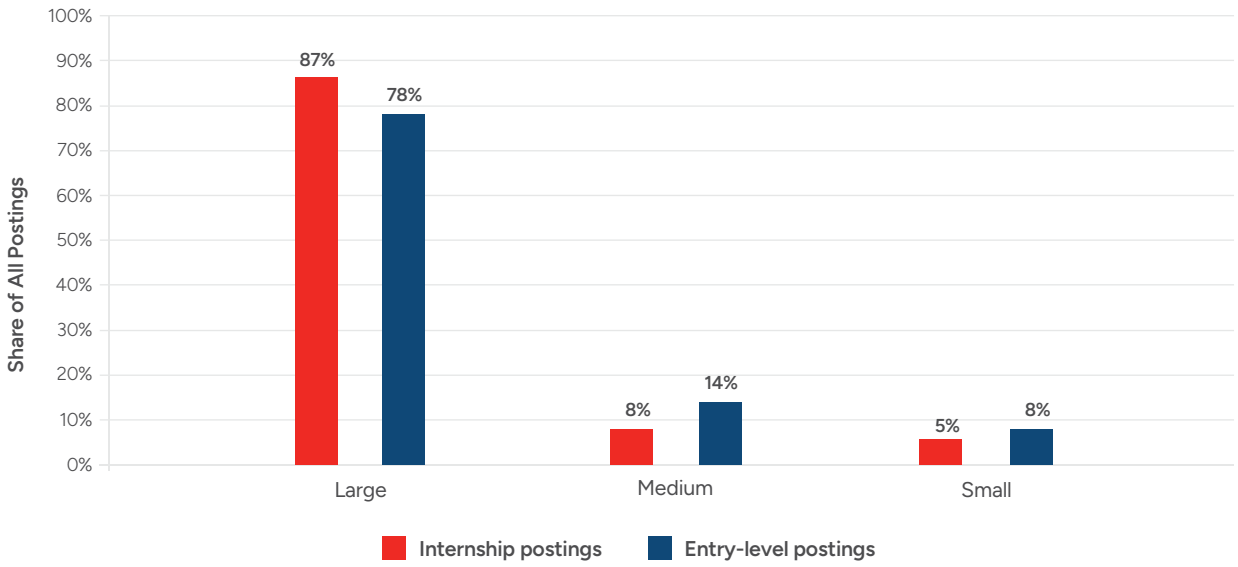
Across all four quadrants, the matrix reveals that internship markets are shaped by employer talent strategies. But strategy requires capacity. Understanding why these models diverge so sharply requires an examination of the structural barriers that determine whether employers can afford to build the architecture in the first place.

Employer Size: The Small Business Disadvantage

In the job postings data analyzed for this report, large employers account for 86% of internship postings and a 78% share of entry-level postings (those requiring a bachelor's degree and zero years of experience). Because postings data likely underrepresent hiring by small and mid-sized firms, these figures should not be interpreted as the true distribution of all entry-level hiring in the economy. However, we have no evidence that those representational issues impact internship and entry-level hiring differently. As such, within the observable online postings market, the pattern is clear: internship postings are even more concentrated among large employers than entry-level postings are.

The mirror image holds for small and mid-sized employers: they account for 22% of observed entry-level postings but only 13% of internships, a gap that persists across sectors, suggesting that it is not simply a product of industry composition. Large companies account for the majority of internships in every major industry sector. In 17 of those 20 sectors, that concentration is near-total, with large employers accounting for at least two-thirds (68%) of internship postings.

Figure 10: Internship Postings Are Less Densely Clustered in Small and Mid-Sized Firms



Source: Burning Glass Institute analysis

This disparity becomes even clearer when viewed through the entry-level-to-internship ratio. For large firms, the ratio is approximately 9-to-1, indicating that internships are a well-integrated part of their talent pipeline. For small and mid-sized businesses, however, that ratio is nearly double, at roughly 16-to-1. This means that for every internship they advertise, they also post 16 entry-level openings, signaling a heavy reliance on external hiring rather than a strategic pipeline.

That gap represents a significant pool of untapped potential: if small and mid-sized firms were to match the 9-to-1 ratio of their larger counterparts, it would generate an estimated 395,000 additional internship opportunities nationwide. If those firms also matched the internship density that large employers achieve in sectors with the lowest entry-level-to-internship ratios, the estimate rises to between 500,000 and 780,000. What, then, prevents them from doing so? The result may not be a lack of interest or commitment; it may reflect a fundamental difference in how these costs scale.

The asymmetry reflects genuine structural barriers. Large employers can absorb internship costs efficiently. They have dedicated HR departments, formalized training systems, established recruiting pipelines, and the financial capacity to onboard candidates during periods of business uncertainty. A large professional services firm can run a cohort of 30 interns through a structured eight-week program with consistent project assignments, mid-point reviews, and conversion decisions at the end. The advantage is scale: while the administrative overhead is substantial, it is spread across many placements.

A 25-person manufacturing firm, by contrast, faces a fundamentally different calculus. Without dedicated HR staff, it must navigate wage and labor compliance requirements, design work assignments that are both meaningful for the intern and productive for the business, and compete for candidates against firms

whose brand recognition and structured programming make the choice easy for students. All of that must be executed without the fixed infrastructure to absorb those costs. The result is a predictable default: just-in-time hiring, filling entry-level roles with resumes and a few interviews that the firm could have been de-risking through a pipeline, if the infrastructure existed to support one.

The implication is that targeted reductions in administrative burden could unlock significant latent supply without requiring small employers to build full HR infrastructure from scratch. As we explore in detail in Section 5, interventions could include coordinated recruiting platforms, shared compliance infrastructure, and subsidized wage programs.

Geography: Where Opportunity Concentrates

The third structural fault line is geographic. Internship postings are heavily concentrated in major metropolitan areas, and the concentration is not simply a function of where employers are located. Controlling for employer presence, employers in urban labor markets generate internship postings at meaningfully higher rates than comparable employers in mid-sized cities and rural areas.

This pattern is consistent with the role that density plays in early-career labor markets more broadly. Dense urban labor markets support higher rates of worker-employer matching, stronger professional networks, and lower search costs; all of these dynamics favor internship formation.

The geographic concentration problem compounds the employer size problem. Small and mid-sized employers are disproportionately located outside major metros, meaning that students at regional and rural institutions face a double disadvantage: fewer large employers in their local markets and lower internship formation rates among the small employers that are present. Remote internship models, which expanded significantly during the pandemic period, partially mitigated this disadvantage.

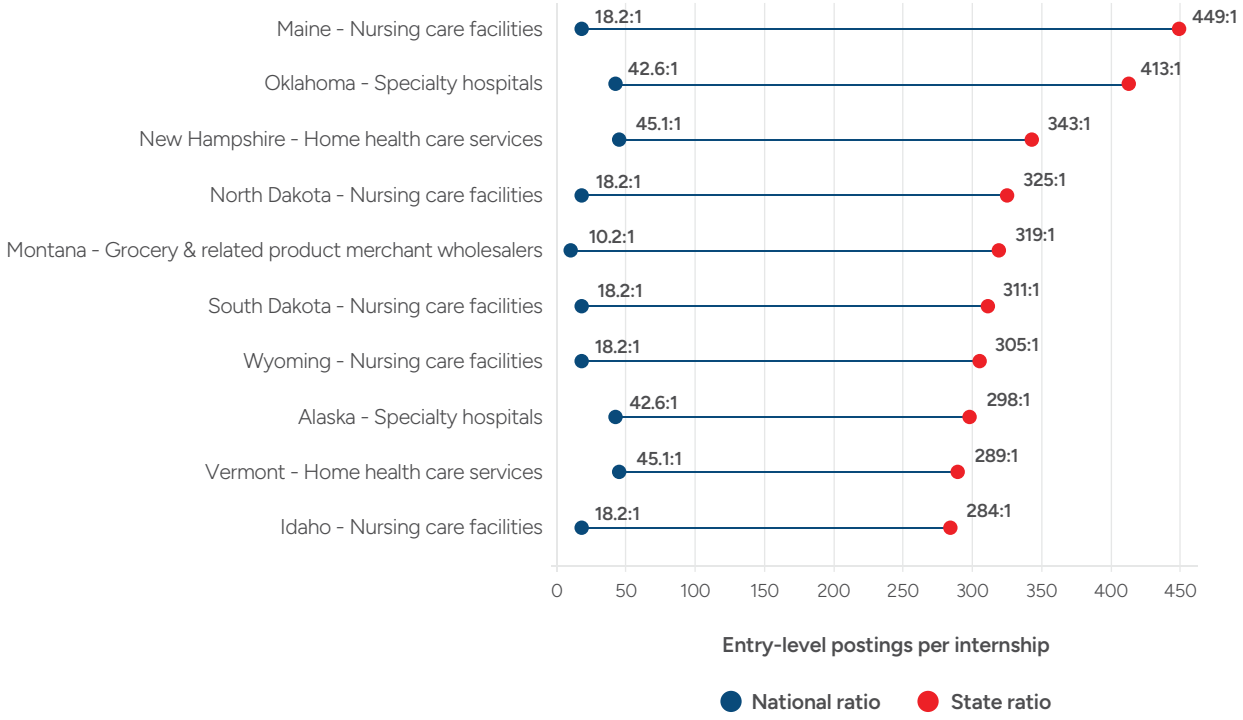
Pipeline Gaps at the Extremes

As Section 1 established, the national 9.9-to-1 ratio masks dramatic variation across sectors, with healthcare and several retail and wholesale sub-industries posting ratios above 20-to-1 even before geographic factors enter the picture. The disparities become more extreme when the three structural barriers identified above converge: small employers, immature sectors, and thin geographic markets.

When geographic constraints are layered on top of these industry vulnerabilities, the disparities become extreme. The entry-level-to-internship ratio makes this compounding concrete. While the 16-to-1 figure for small businesses is markedly higher than the national average, specific state-industry combinations are far worse. For example, nursing care facilities in Maine post 449 entry-level roles for every single internship, while the ratio for Montana wholesalers exceeds 300-to-1. In these markets, the on-ramp is not just narrow. It is virtually non-existent. Figure 11 maps the most extreme state-industry combinations within that distribution.

What these markets share is not a single cause but a convergence of them. The sectors with the highest state-level ratios tend to combine large entry-level workforces with employer bases that are predominantly

Figure 11: The Widest Gaps in Entry-Level-to-Internship Ratios, by State and Industry



Source: Burning Glass Institute analysis

small, geographically dispersed, and without the institutional infrastructure to build pipeline programs without external support. In their absence, other institutions have attempted to fill the gap with results that are, as the next section makes clear, partial at best.

The Multiplier Effect: How Intersecting Supply Barriers Compound Disadvantage

While these three structural factors are significant on their own, their most consequential feature is how they compound. Consider students attending a regional institution in a smaller market. They are likely surrounded by small employers without HR infrastructure, working in sectors with underdeveloped pipelines, and living in areas that lack internship density. Furthermore, such students are less likely to have the financial resources to bypass these local barriers by relocating to a major city or accepting an unpaid role. No single hurdle forecloses access on its own. Stacked together, however, they produce a systematic exclusion driven by geography, institutional selectivity, and income. The result is a bitter irony: the students with the most to gain from internships face the highest structural barriers to accessing them.

Maximizing Value Across All Quadrants

While the Immature Pipelines quadrant will require the most foundational intervention, there is significant room for improving internship capacity development for both employers and students.

- **Auditions for the Job (High Overlap / High Conversion):** The data shows highly efficient pipelines in this quadrant, with conversion rates often exceeding 70%. What is more, a practical implication of the high skill overlap is that the remaining 25-30% of non-converting students still exit the program with highly marketable, industry-aligned skills. To maximize the value of this talent pool, future program designs or institutional partnerships should explore "off-ramp" networking. Ensuring these well-prepared students are smoothly transitioned to other employers in the sector, rather than starting their job search from scratch, represents a clear opportunity to boost industry-wide hiring efficiency.
- **Hyper-Competitive Screening (High Overlap / Low Conversion):** In sectors where our analysis shows high skill alignment but low conversion, the data implies a structural bottleneck: employers are deploying highly skilled intern labor but ultimately leaving a substantial amount of pre-vetted talent on the table. A crucial area for practical intervention and future research is how to capture this lost value. Plausible solutions for employers include better aligning intern cohort sizes with actual full-time headcount forecasts, or—more collaboratively—building formalized consortiums to share this surplus of highly skilled intern talent with mid-sized firms in their broader supply chain.
- **Talent Incubators (Low Overlap / High Conversion):** The data indicates that in these sectors, students are hired at high rates, but the skills required in their internships do not closely mirror their eventual entry-level roles. This disconnect suggests that hiring decisions here may rely more heavily on general potential or cultural fit rather than direct, applied skill development. It is important to highlight this dynamic because it poses a plausible risk to day-one readiness and equitable, merit-based hiring – as well as a challenge to those interns who don't receive a full-time offer. A direct practical implication for employers in this quadrant is the opportunity to intentionally redesign intern job descriptions, integrating more occupationally relevant tasks to ensure the internship serves as true technical preparation rather than just a generalized screening mechanism.

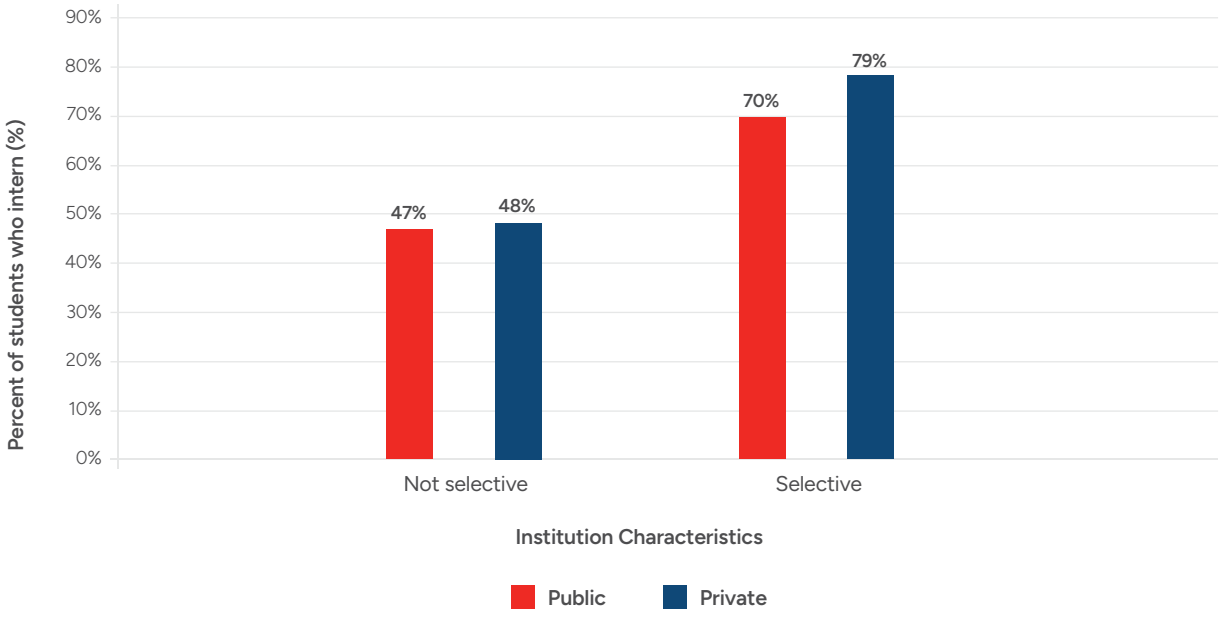
Section 4: Access and Equity: How the Internship Market Amplifies Disadvantage

Section 3 identified three structural barriers that independently suppress internship supply and compound severely when they overlap. The students most exposed to that compounding are not randomly distributed across the higher education system. They are concentrated at less selective institutions, in lower-income zip codes, and in demographic groups for whom early-career labor market signals are weakest and employer uncertainty about candidate quality is highest. The internship system does not merely reflect existing barriers. It amplifies their effect.

The Selectivity Gap

The most direct evidence of access stratification is institutional. Students at selective public universities participate in internships at a rate of approximately 70%, compared to around 47% at less selective* institutions, a roughly 23-percentage-point gap. At private institutions, the selectivity gap is even greater (30 percentage points). In other words, paying a premium doesn't necessarily buy better access: despite the higher price tags, less selective private institutions place interns at about the same rate as less selective public ones.

Figure 12: School Selectivity Shapes Likelihood of Interning



Source: Burning Glass Institute analysis

* Selectivity is determined by university admission rates, with schools with an admission rate less than 50% considered selective.

That gap likely reflects the combined effect of multiple structural advantages: selective institutions have larger career services staffs, deeper employer relationships, stronger alumni networks, and higher concentrations of students with the financial cushion to accept unpaid or low-wage internship positions in high-cost urban markets. Less selective institutions are more likely to face the supply constraints identified in Section 3: they tend to be located in smaller markets with fewer large employers, serve students with less financial flexibility, and have fewer institutional resources to compensate through their own career services investment. They also disproportionately serve first-generation students, students from lower-income families, and students of color.

Demographic Gaps Within the System

Even controlling for internship participation, gender and racial gaps in early-career outcomes persist. Women and students of color who complete internships are more likely than their White male peers to experience underemployment and weaker wage trajectories in the first three years after graduation.

The evidence points toward two primary drivers of these disparities. The first is occupational segregation. Among graduates who interned, underemployment rates for women are roughly two percentage points higher one year after graduation and about 2.5 points higher three years out. However, the evidence suggests this gap is less about unequal access to internships than about the fields students are entering. Women are disproportionately represented in internship pipelines for education, healthcare, social services, and other public-facing fields. These are sectors that cluster in the Immature Pipelines quadrant and carry lower conversion rates and starting wages. Meanwhile, male graduates are more likely to enter pipelines for higher-paying occupations. Because the underemployment gap shrinks to zero when controlling for occupation, the implication is clear: while internships appear to help students gain entry into their chosen fields, they do not, on their own, undo broader labor-market structures such as occupational segregation and industry-level pay disparities.

The second driver of disparity is network asymmetry. The professional network formation that is among the most durable benefits of internship participation is not equally accessible within the same program. Students from lower-income backgrounds and underrepresented groups report weaker integration into informal professional networks during their internship experiences, a gap that reflects both cultural barriers and the degree to which professional networks in high-value industries remain socially homogeneous.

This suggests that simply expanding access is necessary but not sufficient. Participation without placement quality, and placement without network integration, reproduces the inequality they are intended to address.

Underutilized Talent, Unrealized Employer Value

The access and equity problem is not exclusively a student issue because unequal access to internships also determines which employers get access to early-career talent. The concentration of internships among large employers and in major metropolitan markets means that a substantial share of the nation's small and mid-sized businesses, which collectively employ roughly half the U.S. workforce, are largely absent from the early-career talent pipeline. These employers urgently need talent. They face persistent skill and hiring challenges, and many operate in exactly the sectors where workforce development gaps are most acute. However, as Section 3 established, they lack the HR infrastructure, compliance capacity, and brand recognition to compete effectively for intern talent without structural support. In equity terms, this means the students least likely to have institutional support are also least likely to reach the employers that most need structured early-career pipelines. In economic terms, it means talent is being left unmatched to demand.

The result is what might be described as a stable but inequitable equilibrium. The internship system efficiently serves students who are already positioned to compete, such as those with institutional support, financial flexibility, and access to high-conversion employer pipelines. Simultaneously, it leaves substantial talent unrealized and substantial employer value uncaptured. It is a system that works well by its own internal logic but fails badly by any broader standard of labor market efficiency or social equity.

Closing that gap does not require rebuilding the system. It requires targeted interventions on the specific structural barriers that Section 3 identified: administrative support for small employers, subsidized wage infrastructure, remote and hybrid models designed to preserve the network formation benefits of in-person experience, and coordinated institutional investment in the sectors and geographies where internship pipelines are most underdeveloped. Section 5 examines what those interventions look like in practice, and what the evidence suggests about which of them work.

Section 5: From Bottleneck to Bridge: A Blueprint for Action

The diagnosis in Sections 3 and 4 produces a clear and actionable implication: because the internship gap is primarily a problem of employer architecture, the solution is architectural as well. The challenge is not to create new jobs where none exist. Entry-level demand is not the binding constraint; the absence of structured pathways into those jobs is. Nor is the answer to persuade students to participate more actively in a system whose design tends to exclude them when the bottleneck is more often the lack of structured on-ramps.

The primary challenge is twofold: first, to help the large part of the economy lacking internship infrastructure to build it; and second, to remove the specific structural barriers that have historically prevented this development. The entry-level-to-internship ratio provides the targeting mechanism, identifying where the gap between latent hiring demand and realized pipeline capacity is largest. The matrix provides the model for diagnosing what kind of gap each sector or employer faces and what type of intervention is most likely to close it. The fault lines identified in Section 3 provide the intervention points, specifying not just where the gap is, but why it exists: whether the barrier is employer size, sector immaturity, or geographic isolation.

Five priorities follow from that diagnosis.

1. Build Pipeline Architecture in Immature Sectors

The largest untapped opportunity in the internship market is not in the sectors that already have structured pipelines. It is in the Immature Pipelines quadrant, the sectors with substantial entry-level hiring demand and virtually no internship infrastructure to match it. For example, the IT and education sectors hire thousands of entry-level workers annually through just-in-time recruitment rather than structured pipelines, paying the price of that approach in higher onboarding expense, greater early attrition, and slower time-to-productivity.

The model for what works already exists within the same economy. In professional services and accounting, internships function as extended auditions, structured experiences closely aligned with entry-level work, managed with formal evaluation and explicit conversion targets. The Big Four accounting firms convert between 71% and 74% of their interns to full-time roles not because audit is uniquely well-suited to internship experiences but because those firms made a deliberate architectural investment in making internships central to their hiring strategy.

The practical goal for Immature Pipeline employers is not to replicate that model wholesale; it is to move incrementally toward it. For a healthcare system that currently has well-developed clinical training pathways but almost no internship infrastructure in IT, operations, billing, and compliance, the first step is not a formal eight-week program with cohort conversion targets. It is a more modest commitment: identifying two or three operational roles that can serve as genuine host positions for an intern, connecting those roles to existing entry-level job descriptions, and establishing a clear evaluation process at the end.

The entry-level-to-internship ratio is the practical benchmark for that incremental progress. A sector currently at 40:1 that moves to 20:1 has doubled its pipeline capacity, producing twice as many interns relative to its existing entry-level hiring base without requiring any increase in the sector's overall employment. The point is not that headcount growth is undesirable; it is that pipeline improvement does not depend on it. The opportunity already exists in the volume of entry-level hiring that sectors like healthcare and logistics do every year. The task is converting more of that hiring demand into structured pipeline relationships rather than just-in-time recruitment.

Employers in these sectors often lack a template. Intermediary organizations such as workforce boards, industry associations, chamber consortia can play a critical role by providing program design support, model internship agreements, and peer networks that lower the cost of building infrastructure from scratch. For large employers in immature sectors, the primary barrier is typically not financial; rather, it is the absence of institutional knowledge about how structured programs get built and why they pay off. A regional hospital network or major logistics operator has the resources to fund a program; what it often lacks is a model, a peer network, and someone with the organizational mandate to build the architecture. That is where intermediaries add the most value: not as funders, but as design partners and connectors. The financial barriers that do exist in this context are concentrated primarily among smaller employers and are addressed directly in Priority 2.

2. Reduce Costs for Small and Mid-Sized Employers

The employer size gap is, at its core, a cost problem. The administrative overhead of a structured internship program, which includes compliance, supervision, performance evaluation, and recruiting infrastructure, is essentially a cost of entry that must be paid regardless of program size. For a large professional services firm, this cost is negligible when spread across scores or even hundreds of placements. For a 25-person manufacturer, however, this overhead falls entirely on a few employees who are already at capacity. The result is not a lack of interest or commitment; it is a fundamental difference in how these costs scale.

That economic barrier is addressable. Shared supervision models, in which multiple small employers pool a dedicated internship coordinator, often housed at a regional university or community college, can spread fixed costs across employer networks. Subsidized wage programs reduce the direct compensation burden, particularly in industries with thin margins. Streamlined compliance guidance removes the legal uncertainty that leads many small employers to avoid internships entirely rather than risk inadvertent violations of wage and hour law. And coordinated recruiting platforms that connect pre-screened student candidates to regional employers reduce the search costs that currently favor large firms with established university relationships.

Targeted public investment can accelerate those efforts. Tax credits or wage subsidies directed at small employers in high-ratio sectors and geographies provide the most efficient return, since those are precisely the contexts where the gap between latent demand and realized pipeline capacity is largest. The entry-level-to-internship ratio provides the targeting mechanism for ensuring that support reaches sectors where it matters most rather than subsidizing programs that would have existed anyway.

3. Use the Ratio to Focus and Prioritize Regional Coordination

The entry-level-to-internship ratio is not only a diagnostic tool. Used consistently across states, regions, and industries, it is also a targeting mechanism for coordinated investment. The sectors and geographies where ratios are highest do not necessarily struggle with the same binding constraint. Some high-ratio sectors in major metros face what is primarily a strategic problem: large, well-resourced employers that have simply not made the architectural investment. Others face a capacity problem, as small employers lack the HR infrastructure to build programs even if motivated to do so. And still others face a geographic problem: hard-to-access student talent pools, limited institutional partnerships, and distance from the major markets where internship norms are most established.

Effective regional strategy requires distinguishing between these constraints, because the appropriate response to each is different. When high ratios reflect strategic failure at large employers, the intervention is engagement and incentive: demonstrating the ROI of structured pipelines, providing peer comparison data, and making the competitive cost of the architecture gap visible. When high ratios reflect capacity constraints at small employers, the intervention is shared infrastructure: pooled supervision, compliance support, coordinated recruiting. When high ratios reflect geographic isolation, the intervention is both structural and technological: strengthening institutional partnerships with regional employers, building remote and hybrid internship models that preserve learning quality, and pooling supervisory capacity across employer networks that individually could not sustain a program.

Educational institutions are well-positioned to anchor these regional coordination efforts. Universities and community colleges already have relationships with regional employers, existing career services infrastructure, and direct knowledge of local student talent pools. Multi-institutional consortia, particularly those organized at the state or regional level, can share that infrastructure, coordinate employer outreach, and develop shared platforms that make internship matching more efficient for both students and smaller employers.

A practical starting point for any regional initiative is the same: identify the industries and geographies where the ratio is highest, distinguish between capacity and strategy constraints, and deploy the intervention most likely to move the ratio. A nursing care sector posting 449 entry-level roles for every internship does not need an awareness campaign. It needs operational infrastructure: program design support, supervisory pooling, and wage subsidies to make the economics work for employers with thin margins. The ratio identifies the target. The matrix helps diagnose the constraint. The priority is to start.

4. Expand Paid Opportunities to Broaden Access

The architecture problem and the equity problem are deeply intertwined. Unpaid internships are often a symptom of immature pipeline infrastructure, arising when employers fail to make the strategic investment that embed and fund internships in their hiring models. Beyond being a symptom, they are an independent barrier to access. Students who cannot afford to work for free are systematically excluded from the internship market, regardless of how much employer infrastructure improves. Furthermore, because those

students are disproportionately first-generation, lower-income, and from less selective institutions, unpaid internship norms compound the access gap at every level.

The practical priority is not to mandate paid internships across the board. Such a requirement would likely push some employers out of the internship market entirely. Rather, the goal should be to build the financial infrastructure that makes paid internships the norm rather than the exception. Targeted stipend models, administered through public or philanthropic partners and tied to economic-need criteria, can offset student costs without displacing employer funding. An expansion of Federal Work-Study to more fully support private-sector and nonprofit internships would allow colleges to use existing financial aid allocations to subsidize paid, career-relevant employment for students who would otherwise be priced out.

These investments do not merely address equity. They expand the talent pool available to employers. A healthcare system building an operational internship program in a mid-sized metro cannot design it for students who can work for free. Subsidized wages make the employer's program viable for a broader range of students, which in turn makes the program more durable, more diverse, and more likely to function as a genuine pipeline rather than a credential for the already advantaged.

Conclusion

Internships have become the premier gateway to career opportunity in the U.S. labor market. The evidence is consistent and durable: students who intern are more likely to be employed, less likely to be underemployed, more likely to work in roles aligned with their field of study, and more likely to build the professional networks and early-career optionality that set long-term trajectories. The internship has become, in much of the economy, the interview that lasts a summer—and for students who complete multiple experiences, the advantages compound in ways that raw participation numbers do not fully capture.

Employers benefit through a different mechanism: structured internship programs reduce hiring risk, lower onboarding costs, and provide earlier access to talent that would otherwise be sorted through more expensive, less reliable just-in-time recruitment. In structured industries, conversion rates average roughly half of all interns, reaching around 75% at the most intensive programs. Those figures underscore that for employers who have cracked the code, internships are a core workforce strategy.

The constraints on access, however, are structural. The problem is not insufficient jobs. Employers in sectors with the highest entry-level-to-internship ratios are hiring at scale. But they simply have not built the pipeline infrastructure that would allow that hiring demand to function as opportunity for students.

The Skill Overlap × Conversion Matrix makes this argument visible in a way that participation data alone cannot. Industries in the Immature Pipelines quadrant have not failed to provide internships because their work is unsuitable for early-career learning. They have failed to provide them because they have not made the deliberate architectural investment that turns entry-level hiring into a structured talent pipeline. A healthcare system that maintains a 40:1 ratio in its operational functions while sustaining robust clinical training programs is not operating under fundamentally different structural constraints than a Big Four accounting firm. It has made a different choice about what to build.

That reframing matters because it changes the solution. If the internship gap were primarily a supply problem of too few employers and too little demand, the remedy would be to create more jobs. But if it is an architecture problem, the remedy is to build infrastructure. Thousands of new internship pathways can be created without adding a single new entry-level role, simply by shifting the way existing hiring demand is structured. The entry-level-to-internship ratio is the measure of that gap and the benchmark for progress.

The equity implications are equally direct. The students with the most to gain from internship access face the highest structural barriers to reaching it. The barriers are well-documented: these students are more likely to attend institutions with limited career services infrastructure and fewer established employer partnerships, more likely to depend on local labor markets where internship density is lowest, and less able to relocate or forgo wages to pursue opportunities in distant urban centers. Expanding access means more than increasing the raw number of internships. It means building infrastructure in the places and sectors where it is most absent, which are, not coincidentally, the same places where the benefit to students would be greatest.

The system that exists today is not broken. For many, it operates with impressive efficiency. The question is whether the economy can afford to rely on a system that works exceptionally well for only a fraction of

the market: students at well-resourced institutions with established employer relationships, competing for positions at large firms with structured hiring pipelines. This narrow focus leaves most entry-level hiring demand unconnected to any pipeline at all.

Employers in high-ratio sectors are paying the price of just-in-time hiring through onboarding expense, early attrition, and talent lost to competitors who got there first. Meanwhile, students without access to structured pipelines are paying the price through underemployment, occupational misalignment, and early-career trajectories that grow harder to correct with each passing year.

Closing that gap does not require a new program. It requires a different way of thinking about what internships are. In the sectors that have built them well, internships are not a supplement to the hiring process. Instead, they are the hiring process: the most effective mechanism available for reducing uncertainty, identifying talent, and building the early-career relationships that translate into long-term workforce advantage. Making that true across the full economy requires deliberate investment from employers who have not yet built the architecture, coordinated support from institutions and policymakers who can lower the fixed costs of building it, and a targeting discipline that directs resources toward the sectors and geographies where the gap is widest and the return is greatest.

This report provides a blueprint for that work, but it is not the final word. Several questions deserve deeper attention because they would sharpen where and how the blueprint should be applied.

First, future research should follow the students who do not convert. This analysis tracks interns who move into full-time roles with their host employer, but it does not evaluate the onward trajectories of those who do not. Whether non-converters move to peer firms, exit the occupation, or experience wage penalties relative to converters matters directly for interpreting the welfare effects of hyper-competitive screening regimes.

Second, the analysis should move from sectors to occupations. This report's primary concern with analyzing the demand-side impediments to internship expansion demanded a sectoral focus. However, industry-level cuts mask substantial variation within firms and industries: a software engineering intern at a manufacturing firm may experience a very different internship-to-hire pipeline than a process engineering intern at the same firm. Occupation-level analysis, using O*NET task content or SOC-based crosswalks, would make it possible to identify which pipelines are mature, which are ad hoc, and where employer infrastructure is most needed.

Third, future work should examine internships as sequences rather than isolated events. In fields such as finance and technology, students increasingly complete multiple internships before entering full-time employment. Understanding whether later internships complement earlier ones, substitute for them, or simply re-screen candidates who already possess strong labor-market signals would clarify how advantages compound over time.

Finally, the international dimension warrants closer attention. Visa-constrained students face a different set of options, constraints, and risks. Understanding how immigration policy shapes internship access, employer sponsorship decisions, and conversion dynamics would help explain where otherwise strong pipelines fail to translate into opportunity.

Internships work. The infrastructure to make them work everywhere is not yet built. But the blueprint now exists.

Appendix

Job Profiles Analytic Dataset

This report draws on the Burning Glass Institute's database of the career histories of over 65 million workers, roughly 40% of the U.S. workforce, derived from resumes and professional profiles collected from across the web. Because this is "found" data, it is subject to the limitations inherent in any user-reported source, including inconsistent terminology, unstandardized job titles, and variation in how workers describe their own experience. To address these challenges, the Institute's research team applies a suite of advanced classification algorithms to systematically harmonize and improve upon the underlying data. Occupations are mapped to a standardized taxonomy to enable consistent comparisons across workers and time; industries are assigned using structured classification schemes aligned with federal standards; fields of study are normalized and linked to recognized major categories; and educational institutions are identified and matched to authoritative reference databases including IPEDS. Together, these enhancements transform a large but noisy corpus of self-reported career information into a research-grade longitudinal dataset capable of supporting rigorous analysis of labor market trends and workforce outcomes.

For most of the analysis conducted in this report, we rely on job profiles data. These are often self-reported data from job holders containing detailed information about their educational attainment and employment histories.

Our analysis includes all Associate's and Bachelor's degrees from IPEDS schools with a graduation year of 2016-2023 and a recorded major. For the small fraction of records (approximately 2.6%) missing a school start year, we impute start year values as four years prior to graduation for Associate's degrees and six years prior to graduation for Bachelor's degrees. This imputation ensures that we can retain experiences occurring while students were enrolled. To ensure a representative sample, we exclude universities where graduates represent less than 5% of the reported IPEDS total for that year.

We look for internships while the worker is in school, allowing for a 1-year post-graduation window to account for data limitations around exact employment dates. This process allows us to construct a clean analytic dataset linking student education records to experiences while accurately identifying internships.

Internship Classification Methodology

To identify and classify internship experiences among college students, we employed a multi-step approach combining student profiles, job postings, and validation exercises. We start by classifying any experience as an internship if the job title the student reports includes the word "intern" or "internship". Because some student experiences during college may be internships, but not contains either of those words directly, we move beyond a keyword search to expand the definition as follows.

We first augment our list by determining whether there are common job titles in the job postings data that are found in the job profiles data that may not have the word "intern" in the title text. If there is overlap

between these two, then we add the job title to our internship definition. We construct the job postings data in the following way to ensure we are comparing job postings for intern-level positions. We limit to job postings from 2016-2023 that are tagged as internships. For job postings, instead of relying solely on "intern" or "internship" appearing in the job title, we also flag postings where these terms appear in the body of the text. To focus on undergraduate-level opportunities, we limit postings to those requiring 0-1 years of experience and with minimum education requirements of high school, associate's degree, bachelor's degree, or missing education information. Postings requiring an advanced degree are excluded, as they often correspond to internships intended for graduate students.

With the postings and profiles datasets constructed, we then create distributions of the 30 most frequent job titles in each dataset by major. We then compare the lists. If the job is found in both lists, then we add the job to our internship definition. We also augment the internship list for each major by taking the most frequent job title in the Profiles dataset. We validate these job titles by consulting college websites and using ChatGPT to examine how institutions describe internship opportunities for students. We do this to ensure that our method does not include jobs that are not traditionally thought of as internships, but might be frequently held by students during college, such as "teaching assistants."

We formalize the expanded internship definition by classifying any job title containing the terms "intern," "internship," "extern," "externship," "summer," "coop," "cooperative," "co-op," or "co op" as an internship. We supplemented this definition with major-specific job titles tailored to degree level (AA or BA), acknowledging that career pathways differ by degree and that certain majors are specific to either associate or bachelor programs. Our final list of additional terms by major is presented in the table below.

Table. Augmented Internship Definition

CIP Code & Field of Study	BA Additional Internship Job Titles	AA Additional Internship Job Titles
1 Agricultural/Animal/Plant/Veterinary Science	veterinary technician, kennel technician, kennel assistant, veterinary assistant	veterinary assistant, veterinary technician
3 Natural Resources and Conservation	technician	technician
4 Architecture and Related Services	N/A	architectural drafter, architectural designer
5 Area, Ethnic, Cultural, and Gender Studies	N/A	N/A
9 Communication, Journalism, and Related Programs	N/A	administrative assistant, social media manager
10 Communications Technologies/Technicians	N/A	administrative assistant, social media manager
11 Computer and Information Sciences	research assistant	N/A
12 Personal and Culinary Services	N/A	chef, cook, baker
13 Education	student teacher, teacher assistant, teaching assistant	N/A

CIP Code & Field of Study	BA Additional Internship Job Titles	AA Additional Internship Job Titles
14/15 Engineering/Engineering-Related Technologies	coop, cooperative, co-op, co op, research assistant	coop, cooperative, co-op, co op, technician
16 Foreign Languages, Literatures, and Linguistics	research assistant	N/A
19 Family and Consumer Sciences/Human Sciences	research assistant	behavior technician, behavioral health technician
22 Legal Professions and Studies	paralegal, legal assistant, research assistant	paralegal, legal assistant, administrative assistant
23 English Language and Literature/Letters	N/A	N/A
24 Liberal Arts and Sciences, General Studies and Humanities	N/A	N/A
25 Library Science	library page, assistant archivist/ researcher, assistant, circulation clerk	library aide
26 Biological and Biomedical Sciences	research assistant, medical assistant, medical scribe, technician, laboratory assistant	assistant, technician
27 Mathematics and Statistics	research assistant	research assistant
30 Multi/Interdisciplinary Studies	summer analyst, research assistant	administrative assistant
31 Parks, Recreation, Leisure, and Fitness Studies	N/A	trainer, aide, technician
38 Philosophy and Religious Studies	research assistant, legal assistant, paralegal	N/A
40 Physical Sciences	research assistant, researcher, technician, laboratory assistant	researcher, technician, laboratory assistant
42 Psychology	research assistant, technician	research assistant, technician
43 Homeland Security, Law Enforcement, Firefighting	paralegal, legal assistant, research assistant	N/A
44 Public Administration and Social Service Professions	research assistant	administrative assistant
45 Social Sciences	paralegal, legal assistant, research assistant	legal assistant, administrative assistant
46 Construction Trades	N/A	apprentice, technician
47 Mechanic and Repair Technologies/Technicians	technician	technician
48 Precision Production	N/A	technician
49 Transportation and Materials Moving	N/A	technician
50 Visual and Performing Arts	graphic designer, photographer	graphic designer, photographer
51 Health Professions and Related Programs	medical assistant, technician	medical assistant, technician
52 Business, Management, Marketing, and Related Support Services	N/A	administrative assistant
54 History	paralegal, legal assistant, research assistant	paralegal, legal assistant, research assistant

Methodology for Internship Supply & Conversion Analysis

This analysis examines skill overlap and internship-to-employment conversion rates for students graduating between 2016 and 2023, using job profile data linked to internship experiences at large companies, defined as those with 500 or more employees. Due to data limitations, we observe employer characteristics for approximately 43% of all student interns. Within this subset, 50% of Associate's degree (AA) students and 57% of Bachelor's degree (BA) students completed internships at large companies.

Because conversion rates can be sensitive to small sample sizes, we restrict certain analyses to companies with at least 15 interns over the 2016–2023 period. Throughout the analysis, conversion is defined as whether a student interned at a company and was subsequently employed at the same company one year after graduation. Conversion rates are then calculated as the average conversion among interns employed within a given industry, including only interns for whom major, occupation, or industry information is available.

Detailed Internship Skills x Conversion Matrix

This matrix is a framework for categorizing industries based on how they utilize internships as part of their talent strategy. It is built on two primary axes:

- **Skill Overlap:** The degree to which the skills required in an industry's internship postings mirror the skills required in its entry-level job postings. This is calculated using Jaccard similarity.
- **Conversion Rate:** The rate at which interns are hired into full-time roles at the same company, reflecting how intentionally internships are used as a direct hiring pipeline.

Quadrant 1: Auditions for the Job

(High Skill Overlap · High Conversion)

Characteristics:

- Internships function as near-replicas of entry-level roles, serving as a low-risk evaluation period and an extended onboarding process.
- Employers use internships as structured, predictable, and low-risk hiring pipelines.
- The conversion of interns to full-time employees is a core success metric for the internship program.

Key Industries:

- Retail
- Professional Services (e.g., Consulting, Accounting, Audit)

Implications:

- **For Academic Institutions:**
  - Must ensure students graduate with job-ready baseline skills (e.g., technical tools, applied competencies) to widen the pool of competitive candidates.
  - Internships in this quadrant are not a substitute for preparation—they reward it.
  - Students benefit broadly from skill development and market signaling, even if they do not receive a full-time offer.

- **For Policymakers & Funders:**
  - Expanding paid internships in these industries offers a high return on investment, but risks to equitable access are significant.
  - Funding should prioritize programs that widen the pool of qualified candidates, not those that lower hiring standards.
- **For Employers:**
  - The business case is clear: this is an effective, low-risk hiring model. The primary bottleneck is often supervisory capacity, not student demand.
  - To develop this model, employers must ensure the intern experience is a realistic job preview with crystal-clear performance metrics.
  - The main risk is becoming too rigid and overlooking high-potential candidates who do not fit the immediate skill profile.
- **For Students:**
  - This is the most direct route from an internship to a job offer. Internships are effectively the first job, and readiness determines access.
  - Even with the required skills, securing a full-time offer is dependent on performance.
  - Even without an offer, these experiences provide valuable, resume-building skills and credentials.

Quadrant 2: Hyper-Competitive Screening

(High Skill Overlap · Low / Selective Conversion)

Characteristics:

- Strong technical preparation is required for the internship but is not sufficient to guarantee conversion to a full-time role.
- Employers use large intern cohorts to screen for a limited number of top-tier candidates.
- The internship itself signals prestige and readiness to the broader market, even without a full-time offer.

Key Industries:

- Manufacturing
- Finance and Insurance

Implications:

- **For Academic Institutions:**
  - Career services must set realistic student expectations: these internships build skills and optionality but do not guarantee jobs at that specific company.
  - Coach students on how to leverage this experience to get a job elsewhere by actively networking and applying for other roles during the internship.
  - Help students identify and articulate transferable skills and build cross-industry networks.

- **For Policymakers & Funders:**
  - Support should be directed toward "bridge" pathways (e.g., graduate study, research fellowships) and frameworks that promote skill portability.
  - Collaborate with industry and academic institutions to develop cross-industry occupational networks.
- **For Employers:**
  - Internships in this quadrant function as a talent identification mechanism, not a workforce expansion strategy.
  - A key consideration is the risk of investing resources to train talent that is then hired by competitors.
  - Employers may benefit from rebalancing intern cohort sizes or improving conversion pathways to retain more of the talent they develop.
- **For Students:**
  - These internships are powerful signaling devices and are valuable resume-builders even without a conversion.
  - Expect to leverage the experience and skills gained to find a job elsewhere.
  - Actively network and apply for other jobs during the internship period.

Quadrant 3: Talent Incubators

(Low Skill Overlap · High / Selective Conversion)

Characteristics:

- Internships act as a gatekeeping mechanism where conversion is high despite a low technical barrier to entry.
- The internship is less about testing existing hard skills and more about assessing a candidate's potential, cultural fit, problem-solving ability, and capacity to learn on the job.
- Success in the internship often depends on relationship-building and demonstrating soft skills.

Key Industries:

- Health and Social Assistance

Implications:

- **For Academic Institutions:**
  - The traditional "skills gap" narrative does not apply here; internships function as social and professional capital builders.
  - Career services should focus on democratizing access to these opportunities and coaching students on the importance of networking and relationship-building.
  - A key risk is that these internships may reproduce existing inequalities if access is determined by informal networks rather than merit.

- **For Policymakers & Funders:**
  - This quadrant raises potential equity concerns. The combination of low skill barriers and high conversion suggests a gatekeeping function that may be exclusionary.
  - It is critical to scrutinize who gets access and whether conversion is merit-based or relationship-based, as the latter may grant unfair advantages to students with existing social capital.
  - Targeted interventions may be needed to ensure equitable access.
- **For Employers:**
  - This model is highly effective for rigorously testing soft skills like communication, learning agility, and teamwork.
  - The less-technical mandate provides an opportunity to broaden the talent recruitment pool beyond specific majors or backgrounds.
  - Employers must be wary of perpetuating homogeneity or favoring privileged candidates if the selection process is not transparent and structured.
- **For Students:**
  - Technical preparation may matter less than networking, demonstrating potential, and building relationships.
  - Access to these internships is particularly valuable given the high probability of conversion.

Quadrant 4: Immature Pipelines

(Low Skill Overlap · Low Conversion)

Characteristics:

- Internship programs lack a clear strategic purpose; the work is often not relevant to a professional career track, and there is no structured pathway to a full-time role.
- Internships are often episodic, ad-hoc, or used for cheap seasonal labor rather than being integrated into a formal hiring process.
- There is minimal formal internship infrastructure, and skills are more likely to be learned informally on the job.

Key Industries:

- Educational Services
- Public Administration

Implications:

- **For Academic Institutions:**
  - Represents an opportunity to partner with employers to formalize experiential learning and help develop structured internship models.
  - The return on investment for placing students in these internships should be carefully evaluated.
  - Students should be coached to understand that the value is in career exploration and general experience, not a direct job offer.

- **For Policymakers & Funders:**
  - Represents a significant opportunity for internship expansion by incentivizing employers to formalize their programs and pathways.
  - May require different support models, such as funding for industry consortiums or shared apprenticeship programs, to build the needed infrastructure.
- **For Employers:**
  - Represents a missed opportunity to build structured, efficient talent pipelines, which could reduce turnover and recruitment costs associated with direct hiring.
  - Could benefit significantly from formalizing internship-to-hire pathways and aligning intern work with entry-level job functions.
- **For Students:**
  - These internships are unlikely to lead directly to a job within the same organization.
  - The primary value comes from exploring an industry and building general work experience.
  - Students should manage their expectations and maintain a broad job search.

Regression Methodology

We construct our analytic dataset beginning with a cross-sectional student-level sample of Bachelor's degree recipients who graduated between 2016–2019 and 2021-2022.

From student job records, we create a person-by-year-by-job panel that includes all known jobs during and after college. Each record contains job start and end dates, job titles, employers, and industry and occupation codes (SOC). Students may appear multiple times per year if they held concurrent positions. We then merge this panel with the student-level dataset, retaining students without job records, and construct key employment outcomes for each person-year. For students with multiple jobs in a year, we collapse the panel to a unique person-year level, taking the maximum value for most binary outcomes (e.g., employed, aligned, promoted) and the minimum for underemployment, treating the most severe mismatch as relevant. The resulting dataset is reshaped to a person-level panel, where each student is observed once with outcomes measured at 1, 3, and 5 years post-graduation. Our primary estimation uses linear probability models of the form:

$$Y_{ist} = \beta_0 + \beta_1 * \text{Intern}_i + X_i + \theta_s + \delta_t + \varepsilon_{ist}$$

Here, Yist represents outcomes such as employment, underemployment, promotion, or alignment for student i who graduated from school s in year t measured at 1, 3, or 5 years after graduation. The variable Interni indicates whether a student ever participated in an internship or work-based learning experience during college. Xi includes individual-level covariates, including race, sex, and major (entered as fixed effects using CIP-2). We include fixed effects for school (θ_s) and graduation year (δ_t), cluster standard errors at the school level, and use school-by-major clustering as a robustness check.

Outcomes are defined as follows: employment reflects at least one job post-graduation; promotion captures any change in job title at the same company; underemployment indicates jobs typically requiring less than a Bachelor's degree (missing if unemployed); alignment measures occupation-field match based on CIP-SOC mapping; and company switching records whether the student changed employers within the period. We also test for heterogeneous effects by interacting internship participation with race (White vs. Non-White), sex (Male vs. Female), field of study (STEM, Liberal Arts, Business, Health), and, among interns, employer type and job retention (e.g., large employer, nonprofit/government, continued employment at internship employer).

Several considerations guide interpretation. Jobs held during college contribute to the internship treatment definition, but are excluded from post-graduation outcome measurement unless they persist beyond graduation. Internship participation is not randomly assigned; students who intern may differ in observable and unobservable ways, including ability, motivation, and institutional support. While our models control for observable characteristics and include fixed effects, residual selection bias may limit causal interpretation. Finally, incomplete job histories could bias estimates if gaps differ systematically by internship status.

Endnotes

[1] Business-Higher Education Forum, *Expanding Internships: Harnessing Employer Insights to Boost Opportunity and Enhance Learning*, Business-Higher Education Forum, Washington, DC, 2024, https://www.bhef.com/sites/default/files/BHEF_Expanding_Internships.pdf. The figure of approximately 3.6 million represents BHEF's estimate of total internships offered. This figure calculates completed internships rather than total open job postings. BHEF derives this by applying internship participation rates from the 2023 National Survey of College Internships (NSCI) and other historical estimates to 2021–2022 student enrollment data from IPEDS. Specifically, this total supply is composed of 1,723,766 internships held by upperclassmen at four-year institutions; 283,767 by underclassmen at four-year institutions; 401,388 by students at two-year institutions; and 1,165,146 by recent college graduates.

[2] Note: Educational Services includes distinct work-based learning models, such as student teaching, practicums, and clinical placements, that may function differently from conventional internships.

[3] Burning Glass Institute and Strada Institute for the Future of Work, *Talent Disrupted: Underemployment, College Graduates, and the Way Forward*, 2024.

[4] John Robst, *Education and job match: The relatedness of college major and work*, Economics of Education Review, Volume 26, Issue 4, 2007, Pages 397-407, ISSN 0272-7757, https://doi.org/10.1016/j.econedurev.2006.08.003

[5] For the purposes of this analysis, however, we focus on alignment as an early-career outcome rather than estimating downstream earnings effects.


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