



Gatekeeping at work: A multi-dimensional analysis of student, institutional, and employer characteristics associated with unpaid internships

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Executive Summary

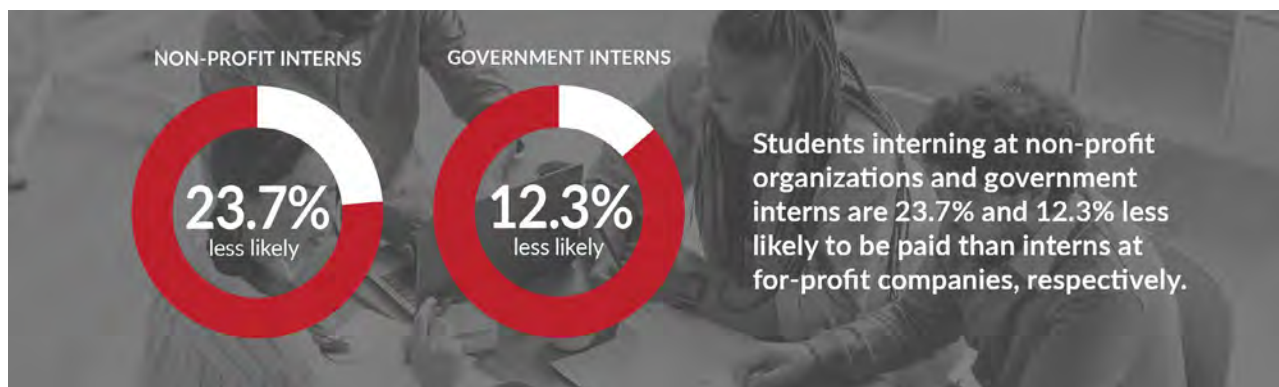
While internships are widely recognized as an influential program linked to higher grades, wages, and post-graduate employment, questions persist about the negative impacts of unpaid internships. This is especially the case for historically marginalized students who may be funneled into low-quality experiences, suffer hardships due to limited financial resources, or simply be unable to pursue what some consider to be a “door opener” to social mobility.

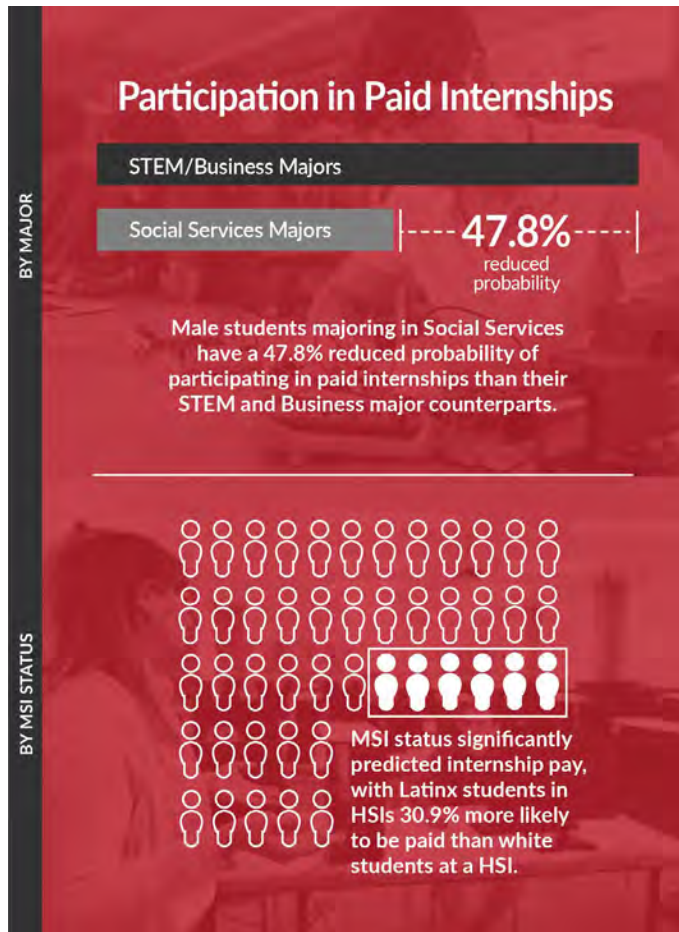
Historically marginalized students may be funneled into low-quality experiences, suffer hardships due to limited financial resources, or simply be unable to pursue what some consider to be a “door opener” to social mobility.

While prior literature indicates that female, students of color, low-income, non-business or STEM majors, and positions in non-profit and government agencies are disproportionately unpaid, empirical work on the topic is limited, atheoretical, and has not examined how these factors may intersect to influence who precisely takes an unpaid position. In this study, we draw on multi-actor theories of internships from management and intersectionality theory to focus on the student, academic and institutional (especially Minority Serving Institution status), and employer characteristics to document the factors most associated with unpaid internship participation.

A linear probability analysis of survey data from students (n=1,154) at 13 postsecondary institutions – nine of which are MSIs – was conducted to address these issues with a focus on interaction terms suggested in the literature (e.g., gender and major, race/ethnicity and MSI status). Descriptive statistics reveal that unpaid internships are unequally distributed among students, especially in terms of gender, race/ethnicity, major, employer organization type, and institution type.

Our final model showed that with interaction terms included, no demographic variables (e.g., gender, first-generation status, family income, and race) were significant predictors of internship compensation. However, both academic and institutional (e.g., major and MSI status), and employer characteristics (e.g., organization type) significantly predict participation in unpaid internships. For instance, male students majoring in Social Services have a 47.8% reduced probability of participating in paid internships than their STEM and





Business major counterparts. Additionally, MSI status significantly predicted internship pay, with Latinx students in Hispanic-Serving Institutions (HSIs) 30.9% more likely to be paid than white students at a HSI. Employer characteristics were also significant predictors, with students interning at non-profit organizations 23.7% and government interns 12.3% less likely to be paid than interns at for-profit companies. Finally, female, transgender, and other gendered students had a lower probability of being paid for their internships than their male counterparts, but this effect was significant only when examined without students' academic majors.

In the spirit of engaging in “transformative social justice” work in the world of college internships (Harris & Patton, 2019), we combine these results with findings from an April 2022 scholar-practitioner symposium that we held at CCWT on unpaid internships to advance a strategy for eliminating these positions from higher education.

Six-Step Strategy for Addressing the Unpaid Internship Problem

- 1 Ban unpaid internships across entire institutions
- 2 Explore Federal Work Study (FWS) to fund internships and ways to make students' employment more educational
- 3 Immediately launch a coordinated and multi-pronged fundraising campaign on each campus to fund internships
- 4 Encourage government agencies to fund their internships and allocate funding for specific industries and/or professions
- 5 Engage in outreach to specific groups of students identified in this study (e.g., non-STEM or Business majors), and
- 6 Expand classroom-based work-integrated learning to make experiential education more equitable and accessible

With these practical and proven strategies in mind, we suggest that with the support and advocacy of campus leadership, the exclusionary and harmful nature of unpaid internships can be mitigated, and someday eliminated once and for all from the nation's colleges and universities.

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Introduction

Internships are an increasingly prominent feature of the higher education landscape, with institutional leaders, higher education scholars, parents, and students increasingly viewing work-based learning as a “high-impact practice” (HIP) that should be an essential (if not required) part of the college experience (Busteed & Auster, 2017; Kuh, 2008). This advocacy is largely due to mounting empirical evidence that an internship can result in higher wages (Guarise & Kostenblatt, 2018) and lower rates of unemployment (Luecking & Fabian, 2000), better grades (Parker III et al., 2016), and even stronger professional skills (Simons et al., 2012) than students who didn’t take an internship.

With employers placing a high value on experience –for which internships can serve as an influential signal (Nunley et al., 2016) - it is no surprise that some view internships as “door openers” to opportunity (Saniter & Seidler, 2014). Consequently, access to a high-quality internship could serve as a catalyst for students’ social mobility, especially for those from historically marginalized groups whose ability to secure well-paying jobs have long been hindered by discrimination, inequality, and limited opportunities.

Not all is rosy in the land of internships, as there are many questions about one type of experience that some fear could actually be harmful to students’ prospects and well-being – the unpaid internship.

But not all is rosy in the land of internships, as there are many questions about one type of experience that some fear could actually be harmful to students’ prospects and well-being – the unpaid internship. Legal questions center on whether unpaid interns are displacing full-time staff as potentially illegal cost-cutting labor strategies (Curiale, 2009; Perlin, 2012), and concerns that unpaid interns are unprotected by U.S. labor law (Stauffer, 2022). In addition, some argue that unpaid internships may be of lower quality than paid positions (Rogers et al., 2021), and scholars have found that unpaid interns have lower job satisfaction after graduation (Crain, 2016), and more negative self-perceptions and lower levels of confidence (Torpey-Saboe et al., 2022) than paid interns. Finally, many observers contend that unpaid labor, even if a program does provide some benefits to students, is simply unethical. Given evidence that some unpaid interns have had to take out loans to cover their living expenses and tuition fees, skip meals, and even live in tents (Curiale, 2009; Foulkes, 2015; O’Connor & Bodicoat, 2017), in an era where students’ basic needs and well-being is ostensibly a prime concern for higher education, the hardships than an unpaid internship may incur are difficult to defend.

Perhaps the most worrying problem with unpaid internships, however, is the prospect that they may be exacerbating inequality and inhibiting some students’ social mobility, one of the most pressing problems of our time (e.g., Chetty et al., 2020). One concern is that certain demographic groups that are already at a disadvantage with respect to income equality – women, students of color, low-income and first-generation students - are being disproportionately funneled into lower-quality, exploitative unpaid internships at higher rates than other groups and/or are being excluded from a substantial number of opportunities due to limited resources or access. For instance, data show that 51% of female interns are unpaid versus just 37% of male students (National Association of Colleges and Employers [NACE], 2021) and that Black students are 13%

less likely than white students to have a paid internship (Torpey-Saboe et al., 2022). Further, because the prospect of forgoing a paycheck is unimaginable for many low-income students, analysts fear that unpaid internships exclude students without ample financial capital and familial resources from the internship labor market entirely (Curiale, 2009). Consequently, it is possible that unpaid internships, which some estimates indicate are 30.8% of the entire internship labor market (National Center for Educational Statistics [NCES], 2017), are effectively functioning as yet another gatekeeping mechanism in our society that reproduces inequality and maintains power, privilege, and resources in the hands of the few (Author et al., 2021).

Little research exists on the prevalence of unpaid internships within Minority Serving Institutions (MSIs)

While a promising line of inquiry on internship compensation is revealing differences in the distribution of these positions across students, majors, institutions, and employer types, the evidentiary base on the precise characteristics of unpaid interns remains limited. Furthermore, the evidence shows that variables such as gender or race alone do not explain discrepancies in internship pay, but that combinations of factors such as gender and race (Torpey-Saboe et al., 2022), major and gender (Gardner, 2012), and major and institution type (Hunt & Scott, 2020) are strongly related with one another, indicating that multi-dimensional and intersectional forces are likely at play in determining internship wages (or lack thereof). Finally, despite growing attention on the role of internships and experiential learning at Minority Serving Institutions (MSIs) (e.g., Adamczyk et al, 2022; Sansone et al., 2019; Strayhorn, 2020) - institutions that play critical roles in boosting the social mobility of underrepresented students - little research exists on the prevalence of unpaid internships within these institutions. This lack of data severely limits the ability of postsecondary institutions, employers, and policymakers to take targeted action to minimize the potential harm done by unpaid internships to the prospects of underserved students, rendering reform efforts to be akin to driving without a road map.

In this paper we address these gaps in the literature by contributing new evidence from a survey of college students (n=1,154) attending 13 postsecondary institutions – nine of which are MSIs - to answer the following questions: (1) How many students had paid versus unpaid internships? (2) Which demographic, academic, and employer characteristics predict internship compensation? In answering these questions, we draw on multi-actor models of internships from the management literature (Narayanan et al., 2010) and intersectionality theory (Crenshaw, 1991) to conceptualize the ways that multi-dimensional factors interact to affect the distribution of unpaid interns among student demographic groups, and characteristics of academic majors, MSI status, and employer organization types. Using a linear probability model approach to analyze the data, we contribute new findings on the unpaid internship phenomena while leveraging these data to advance a practical strategy for “transformative social justice” in the world of college internships (Harris & Patton, 2019, p.394).

What is Known about the Characteristics of Unpaid Interns?

Despite being widely discussed in the media and higher education circles, there are few reliable estimates of the number of college internships in general and of unpaid positions in particular. Why does this matter? Without an accurate account of the size of the internship labor market - which students pursue them, what

colleges and universities are sending students to them, and which employers are not offering wages - the field lacks basic knowledge of the size, scope, and characteristics of a program that is increasingly being touted as an essential part of the college experience.

One of the most cited figures for the number of student interns in the U.S. is from Perlin's 2012 book *Intern Nation*, where the author estimated that 1.2 to 1.5 million internships are taken each year in U.S. higher education. This extrapolation was necessary because Perlin (2012, p. 236) found that there were, "no authoritative statistics" on internships, and unfortunately this remains true over 10 years later. Fortunately, a nationally representative survey does exist that captures college students' participation in internships - the Baccalaureate and Beyond Longitudinal study (B&B 16/17) - which found that 30% of undergraduates experienced an internship in 2017 (NCES, 2017).

While extrapolations are of course inexact, for the purposes of establishing a baseline figure for the number of unpaid internships in this paper, we estimate that 3.28 million college students take an internship while in college. This figure is based on national data that 10.9 million students were enrolled in four-year undergraduate institutions in 2020 (NACE, 2021), and the B&B 16/17 figure of a 30.2% internship participation rate. With the scale of the internship labor market in mind, we next turn to the main topic of this paper - the prevalence and features of unpaid internships.

The data on internship compensation is also scarce, but a growing number of empirical studies provide insights into the scale of the phenomenon. For instance, Crain (2016) found that about 46% of student interns at the University of Georgia were unpaid, while a study of 17 campuses as part of the NSCI revealed that 39.8% of the internships on these campuses were uncompensated (Author et al., 2021). Additional estimates include 46% from NACE (2021), 57% from an analysis of NSSE data (Zilvinskis et al., 2020), and 58.1% from the UK Destinations of Leavers from Higher Education survey (Hunt & Scott, 2020). Finally, while few empirical studies have been published on internships using the B&B 16/17 data (see Torpey-Saboe et al., 2022), analyses of the public data show that 30.8% of students took an unpaid internship (NCES, 2017). Using this figure and the IES figure for undergraduate enrollment (10.9 million), we estimate that there are approximately 1 million unpaid interns a year.

Next, we turn to the central questions motivating this paper - who are the unpaid interns, and are they disproportionately represented by certain demographic groups and/or clustered in particular disciplines, institutions, or employers?

What are key demographic, academic and institutional, and employer features of unpaid internships?

Demographic characteristics

Studies on college internships have identified several demographic characteristics associated with internship compensation - gender, race, first-generation college student status, and socioeconomic status. One of the most studied (and concerning) student-level characteristics associated with internship compensation is that of gender. For example, NACE's (2021) study found that only 37% of male student interns were unpaid,

while more than half (51%) of female interns were uncompensated. Zilvinskis and colleagues (2020) also found that the odds of women being paid for their internship was 34% lower than for male students, and Frenette's (2015) analysis of arts students revealed that 57% of women were unpaid in comparison to 46% of male students. While some scholars argue that the apparent over-representation of women in the unpaid internship market can be due to wage discrimination and the normalization of low-wage work for women (Shade & Jacobson, 2015), another explanation may be due to female students' disproportionate pursuit of particular majors and occupations.

The fact that women comprise the majority of college students enrolled in particular majors is well-established, with examples being healthcare (81%), education (76%), and psychology (72%) (Carnevale et al., 2018). In contrast to fields such as engineering (where women represent only 17% of enrolled majors) or the physical sciences (38%), occupations in these disciplines often feature unpaid training practicum. However, major and occupational choice alone may not explain women's apparent over-representation in unpaid internships. A 2020 analysis revealed that women were paid 82 cents for every dollar earned by a man, with the gap for Black and Latina women being wider and closing more slowly than for Asian and white women (AAUW, 2020). In addition, gender discrimination (Gharehgozli & Atal, 2020) and "outright sexism or unconscious, systemic, and socially entrenched prejudice" are also cited as explanations for the persistence of the gender wage gap (Carnevale et al., 2018, p.10), which theoretically could be impacting the status of female interns' wages.

Researchers have also scrutinized the impact of race and ethnicity on internship pay, largely out of concern that non-white populations are disproportionately pursuing (or being funneled into) these positions. In a descriptive study of art majors, Frenette (2015) found that larger proportions of Black or African American (55%), Hispanic or Latino/a (58%), and Asian (56%) students were unpaid interns in contrast to their white (53%) counterparts. Another study found that Black students were the only group to be disproportionately underrepresented among paid interns, while Asian American students were overrepresented among paid interns and Hispanic students were overrepresented among those who never had an internship at all (NACE, 2020). In contrast, Zilvinskis and colleagues' (2020) analysis of NSSE data found that Asian, Native Hawaiian, and other Pacific Islander students were 50% less likely to receive pay for their internships than other race/ethnicity groups. Finally, analyses of the B&B 16/17 data revealed that Asian graduates were 6% more likely than white graduates to have an unpaid internship, with no significant differences for Black or Latino students (Torpey-Saboe et al., 2022).

One of the most common concerns about unpaid internships is that low-income students are excluded from these potentially influential experiences due to their inability to cover living costs while working for free (Curiale, 2009). However, evidence on low-income students' participation in unpaid internships is mixed. For instance, while Gardner (2012) hypothesized that low-income students (i.e., those with family incomes below \$80,000) would be unlikely to pursue these experiences, but the data showed that these students were overrepresented among unpaid interns (46%) than the higher income group (40%). This analysis also demonstrated the likely interaction between family income and employer type, as high-income students took more unpaid internships than low-income students in for-profit companies, and that low-income students interning in non-profit organizations were more likely to be unpaid than high-income students (Gardner, 2012). In other cases, scholars have found that Federal Pell Grant recipients are less likely to have

paid internships than those without these subsidies, suggesting that socio-economic status is an important variable to consider (Torpey-Saboe et al., 2022).

Another demographic characteristic examined in the literature captures elements of social class – parents' educational attainment – based on the notion that parental networks, knowledge of the professional workforce, and other features of social or cultural capital could privilege some students over others (Foulkes, 2015; O'Connor & Bodicoat, 2017). For instance, Silva's (2021) study on United Nations interns documented that students whose parents had advanced degrees are 37% more likely to participate in unpaid internships than paid internships, while Zilvinskis and colleagues (2020) found no statistically significant relationship between parents' educational attainment and internship pay. Thus, the literature is mixed on whether first-generation status is associated with internship pay.

Academic characteristics: Major field of study and Minority Serving Institution status

Research has also shown that academic characteristics of postsecondary institutions may be associated with interns' wages. While some have examined features of institutional control and type (e.g., public or private, non-profit or for-profit) (Gardner, 2012), most research has focused on students' major field of study. Evidence suggests that students majoring in business, and science, technology, engineering, and mathematics (STEM) disciplines (Crain, 2016; Gardner, 2012) are more likely to participate in paid internships than unpaid ones. In fact, the studies have found that 70% to 92% of STEM and business majors take paid internships, while the proportion of paid internships in other fields can be as low as 3% in education (Zilvinskis et al., 2020) and 35% in the social sciences (Gardner, 2012).

Another feature of colleges and universities – that of their status as a MSI – is receiving increasing attention in research on students' career readiness and experiential learning. A considerable literature exists on ways that Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs) provide unique, supportive, and culturally appropriate learning environments for students of color through features such as a commitment to "serviingness" in HSIs (i.e., fostering leadership skills, critical consciousness, career aspirations) (Garcia et al., 2019), or a focus on cultivating a sense of belonging or Black excellence at HBCUs (Arroyo & Gasman, 2014; Harper et al., 2004).

While some scholars have extended this line of inquiry by examining ways that MSIs support students of color as they pursue internships, such as at a sports management internship at a HBCU (Perry, 2017) or social work internships at a HSI (Nelson & Jackson, 2003), most studies of internships at MSIs do not explicitly delve into ways that racial identity and institutional culture may impact internship program formats or experiences (e.g., Adamczyk et al., 2022). This represents a gap in the literature, as one of the defining characteristics of MSIs is the substantial proportion of students of color attending them, such that students' racial identity and the programs and institutional culture of the institution are often integrally connected. Consequently, little is known about the ways that MSI contexts may shape the relative number of paid opportunities available to students attending these institutions.

Employer characteristics: Type of organization

Finally, researchers have also examined the ways that the types of employer organization and tax status – government, non-profit, or for-profit entities – may influence whether an internship is paid or not.

NACE (2021) reported that non-profit organizations provided the highest proportion (20.2%) of unpaid internships in their data, followed by government agencies (14.2%) and for-profit companies (12.6%). However, internships in particular types of organizations tend to be correlated with certain student majors, with Gardner (2012) finding that STEM and business majors tended to work in for-profit companies, while students in arts and humanities, education, and social science majors were more likely to participate in internships in non-profit organizations, which in turn led to these students disproportionately taking unpaid positions. As a result, paying attention to the interaction between the different demographic, academic and institutional, and employer characteristics implicated in internship compensation is essential, and highlights the need for a framework attentive to these interactions.

Conceptual framework: A multi-dimensional and equity-focused approach

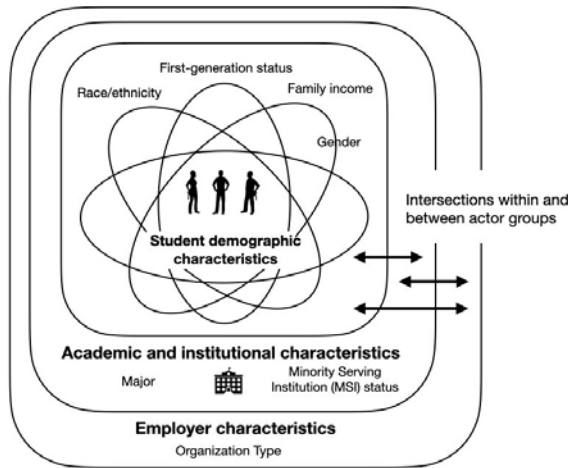
In the case of unpaid internships, with few exceptions (see Crain, 2016) the literature does not explicitly draw upon existing theory to explain the key phenomena at play – which multi-dimensional characteristics are most associated with internship compensation. While many scholars use theory to examine intern learning processes within internships (Simons et al., 2012), psychosocial outcomes of work-based learning (Ocampo et al., 2020), or exclusion from the internship labor market (Author et al., 2021), the problem of compensation has largely been a descriptive exercise.

To address this issue, we first build on the assertion of Loeb and colleagues (2017) that descriptive research is an essential and yet often overlooked part of the research process, where understudied phenomena are examined to document basic patterns and behaviors. In this spirit, we designed a descriptive study that built upon the literature outlined above in focusing on three categories of variables that could explain the prevalence and distribution of unpaid internships - student demographics, academic and institutional features, and employer characteristics.

In addition to this multi-actor perspective from management, we draw on intersectionality theory to conceptualize dynamics of inequality and exclusion in the internship labor market.

This approach is based in part on multi-actor models of internships from the management literature which highlight the roles of students, educators, and employers in collectively shaping internship programs (Narayanan et al., 2010). Narayan and colleagues (2010) developed their framework as a response to the exclusive focus on just one of these role groups, which obscures the influences of the other two. Drawing on research on knowledge and personnel transfer which emphasizes how multiple actors have distinct interests, organizational cultures, and goals for the task at hand – all of which influence the nature of subsequent decisions and programs – the authors argue that studies of internships must account for these three actors (Narayanan et al., 2010). While our study does not examine in depth the distinct ways students, educators, and employers make decisions about compensation, we do explicitly focus on these role groups and how their characteristics may or may not be associated with patterns in the types of internships students ultimately pursue.

Figure 1. Conceptual framework for the study



In addition to this multi-actor perspective, given concerns about the exploitative nature of unpaid internships, along with the foci on intersecting student- and organization-level factors (e.g., gender and major) in the literature, we draw on intersectionality theory to conceptualize how dynamics among multi-level forces may be creating the conditions for inequality and exclusion in the internship labor market. Originally developed by Black feminist theorists in legal studies, intersectionality argues against “single-axis” analyses of oppression by examining the “over-lapping and conflicting dynamics of race, gender, class, sexuality, nation, and other inequalities” (Cho et al., 2013, p.788). In maintaining a focus on how not only social identities but also structural forces constrain

opportunities, Nuñez (2014) offered a framework for studying three interrelated levels of analysis that can perpetuate inequality in higher education – social identities, embodied practices (including organizational processes), and the broader historical, political and economic contexts in which postsecondary institutions and their students live, work, and seek opportunity. We built on Nuñez’s (2014) framework to study how these forces interact to shape (and constrain) Latinx students’ access to internships at HSIs (Author et al., 2022), and in this paper we integrate elements of this approach with the multi-actor perspective of Narayanan and colleagues (2010) to organize the present study (see Figure 1).

It is important to note that this study was not designed to test or implement either the Narayanan et al. (2010) or Nuñez (2014) frameworks, but instead we drew on both sets of ideas to select the variables included in our analysis, and to help interpret the results. Ultimately, our aim was to develop a critical heuristic that explicitly problematized the notion and practice of unpaid internships while also accounting for multi-variate and multi-actor explanations for their prevalence and distribution. With insights into the nature of these relationships (if they exist), our goal as applied researchers committed to revealing and addressing inequality in higher education is to use the results as the basis for an action-oriented set of strategies to help guide postsecondary leaders, faculty, and career services professionals’ efforts to ensure equitable access to paid internship programs for their students (Harris & Patton, 2019).

Methods

In this section we review the research design and sampling approaches used in the study, data collection and analysis procedures, and limitations to consider when interpreting the results.

Research design, sampling, and data collection procedures

The study reported in this paper is part of a large, mixed-methods longitudinal study of college internships in the U.S. As previously noted, this analysis is descriptive and is thus intended to identify associations and not

causal relationships between and among key variables.

The dataset used in this analysis includes cross-sectional student responses to an online survey administered between Spring 2018 to Spring 2020 at 13 postsecondary institutions where leadership (e.g., career services directors, upper administration) self-selected into the study. The data included in this analysis represent the first wave of data collected at each campus. The institutions included five predominantly white institutions (PWIs), six HBCUs, and two HSIs - MSIs were especially targeted during recruitment in order to diversify the study sample while also generating data on these important institutions where work-based learning is understudied. In addition, two of the institutions (both PWIs) were two-year vocational colleges, while the other eleven institutions were four-year universities. These institutions are part of the ongoing College Internship Study at CCWT.

At each institution we received student registration information, except for students enrolled in programs with clinical practicums (e.g., teacher education, nursing). From the study populations we used a stratified random sampling approach based on gender and racial identity data from each institution, which are two key demographic characteristics significantly related to internship experiences (Frenette, 2015; Holford, 2017; Shade & Jacobson, 2015). Based on resource constraints we also capped the size of the study sample at each institution at 1,250 students.

To boost response rates, the study team sent out invitations via mail with a pre-survey cash incentive of \$5 to the 16,191 students in the study population. Two email reminders were sent to non-respondents for four weeks until the survey was closed. A total of 3,809 students self-selected into the study with a response rate for the survey across all institutions of 23.5%. Given the focus of this analysis on internship pay, we included only students who had participated in an internship ($n=1,154$), which was 30.3% of the total study sample. We used list-wise deletion methods to treat responses that contain missing data on variables of interest in this study, which resulted in removing 26 cases (2.25%) and a final dataset of 1,126 student responses. Details of the study sample are included in Table 1.

Research instruments and measures

In order to standardize each respondent's understanding of what our study team meant by the term "internship," the survey opened by providing the following definition:

An internship is a position held within an established company or organization while also completing a college degree, certificate, or diploma program. It involves working in a position clearly designated as an "internship" by the host organization and performing tasks similar in nature and skill-level to tasks done by entry-level employees.

For those who answered that they had taken at least one internship in the past 12 months, the survey prompted participants to reflect on their most recent internship experience for the rest of the items.

Dependent variable. For the primary outcome variable – that of internship compensation – survey respondents were asked a yes/no question about whether their internship was paid.

Independent variables. First, demographic characteristics of students such as self-reported gender, racial identity, first-generation status, and annual family income were collected. Respondents chose their gender among female, male, transgender, and another gender. Given the small number of respondents who indicated transgender (n=6, 0.53%) and other gender (n=13, 1.15%) identities, these data were merged with female (n=772, 68.56%) respondents. The rationale for merging these groups was based on evidence that the members of these groups are historically underserved populations in higher education (Dilley, 2004) and prone to discrimination in the labor market (Cain, 1986) compared to male students. However, we recognize that these groups merit disaggregation when possible.

Next, the racial identity question included the following response options - American Indian or Alaska Native, Black or African American, Hispanic or Latino, Asian or Asian-American, International, Native Hawaiian or Pacific Islander, two or more races, White or Caucasian, and Other. To capture first-generation college student status, the survey item first provided a definition - that of “someone who is the first in their family to attend a four-year college or university and attain a bachelor’s degree” - and respondents answered yes/no about their own status. Then, to capture respondents’ income level, the survey asked for the “best estimate of your parents’ or guardians’ total income last year” before taxes.

Second, academic characteristics referred to student’s majors and the MSI status of their college or university. Respondents chose one option that represents their current major from the NSSE (2018) classification of majors. Next, students were assigned a MSI status based on their institutions being categorized as a HBCU, HSI, or a non-MSI (i.e., a Predominantly White Institution). Finally, employer characteristics included a single variable regarding the organizational structure of the employer (e.g., government agency, for-profit company, and non-profit organization).

Data analysis procedures

All variables were then converted into binary variables (“dummy-coded”) where one (1) indicated the participant is included in the category and zero (0) indicated that they were not affiliated with the subject group. However, some data required recoding. For family income, responses to the categorical item were converted to a binary variable that reflected either \$100,000 or less or \$100,000 or more due to inconsistencies in how categories for family income were included in the survey instrument between administrations of the survey at different institutions (i.e., \$100,000 was the only overlapping cut-point). Given the small number of responses for American Indian or Alaska Native (n=14; 1.24%), Asian or Asian-American (n=43, 3.82%), Native Hawaiian or Pacific Islander (n=3, 0.27%), two or more races (n=47, 4.17%), and other race (n=14, 1.24%), these groups were merged into a single category of “Other Students of Color (SoCs).” This was done for the parsimony of the statistical model, and regrettably involves the obscuring of the distinct identities and experiences of these groups.

In addition, majors were re-categorized - Biological Sciences & Agriculture & Natural Resources (n=144, 12.79%), Engineering (n=84, 7.46%), Health Professions (n=39, 3.46%), and Physical Sciences & Mathematics & Computer Science (n=77, 6.84%) were re-categorized into STEM, while Education (n=9, 0.80%) and Other Majors (n=38, 3.37%) were merged into “Other majors.”

To address RQ1, we examined descriptive statistics (see Table 1) and cross-tabulations from the study

sample. To address RQ2, we used linear probability modeling to analyze the relationship between the key dependent variable of internship compensation and selected independent variables. This technique was selected over binary logistic regression because it provides a more straightforward thus more accessible interpretations of interaction effects – which are a central focus of the study – than logistic regression (Breen et al., 2018). We then followed Breen and colleagues’ (2018) suggestion to apply ordinary least squares regression to a binary outcome, and the coefficients of the results were interpreted with an estimated probability of $Y = 1$. We note that this was a strategic decision acknowledging that this model violates the linearity assumption and the models we used have systematic heteroskedasticity by nature. We used robust standard errors to account for the homoskedasticity of the errors (Breen et al., 2018). The equation for the analysis is:

$$P(X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + \epsilon$$

where the outcome variable $P(Y = 1|X_1, X_2, \dots, X_k)$ is the probability of student i participating in a paid internship. The primary predictors ($X_{1i} \dots X_{ki}$) are a vector of demographic, academic, and employer characteristics associated with the probability of receiving compensation for student i ’s internship. The probability associated with X_{ki} is represented as β_k . The intercept β_0 is the probability of all coefficients are 0, and the error term ϵ represents the difference between the estimated and actual probability. We first examined a model using demographic characteristics (gender, race, first-generation status, family income), academic characteristics (major, MSI status), and employer characteristics (employer organization type) as predictors (Model 1).

Subsequently, we added interaction terms (gender & major, major & employer organization type, race & MSI status) to Model 1 and examined changes in the results (Models 1A, 1B, 1C). Finally, we developed a model that is a parsimonious version with significant interaction terms identified in previous analyses (Model 2) (all model results are in Table 2). A post hoc analysis of Model 2 that compares the least-squares means of interaction terms was followed in order to provide in-depth interpretation of the results (see Table 3). In addition, another post hoc analysis was conducted to explain insignificance of gender in Models 1 and 2 using a stepwise regression approach. R version 4.2.1 was used for both descriptive and inferential analysis.

Limitations

Some limitations need to be considered when interpreting the results of this study. First, our sample overrepresents Black (46.37%) students while underrepresenting students of other racial identities. Black students generally take up less than 15% of the entire college student population (Hanson, 2022), and they take up even fewer proportions of student interns (National Center for Education Statistics, 2017). On a similar note, Latinx undergraduate students comprise 19.4% of the college student population, which is a higher rate than this study’s sample (10.57%). The oversampling of Black students is due to the inclusion of six HBCUs in this study, and the nature of our sample limits our ability to draw conclusions about the prospect of white privilege with internship compensation, which is a finding in prior work (Torpey-Saboe et al., 2022).

Second, there were only two categories of family income used in this study because the survey item used different categorizations of income across institutions. Future research should use more fine-grained

and widely used metrics for capturing family income. Third, some racial and gender groups were merged for inferential analysis due to the small sample size. Future research should ensure a sufficient sample size for each category to examine the racial and gender differences in internship pay (Castillo & Gillborn, 2022). Finally, the data do not provide insights into critical questions of why employers, higher education professionals, and students decide to offer, support, or pursue unpaid internships.

Results

In this section we first report the results of descriptive analyses regarding the prevalence of unpaid internships among different groups of students, followed by results from statistical analyses of key variables that predict participation in unpaid internships.

RQ1. How many students had paid versus unpaid internships?

The data revealed that only 30.30% of the students in the study participated in internships, indicating that widespread engagement in this HIP has not yet been achieved at the study institutions. Of the students who did take an internship, 56.75% had paid internships, while 43.25% of the students participated in unpaid internships. These results are consistent with results from surveys such as the 2020 NACE Student Survey (47% of interns had unpaid positions), Crain’s 2016 study (46%), and the 2021 NSCI survey (39.8%) (see Table 1).

Variables		Total ¹	Paid	Unpaid
Total sample of interns			639 (56.75%)	487 (43.25%)
Demographic characteristics				
Gender				
	Female	772 (68.56%)	406 (52.59%)	366 (47.41%)
	Male	335 (29.75%)	225 (67.16%)	110 (32.84%)
	Transgender	6 (0.53%)	4 (66.67%)	2 (33.33%)
	Other gender	13 (1.15%)	4 (30.77%)	9 (69.23%)
Race				
	American Indian or Alaska Native	14 (1.24%)	9 (64.29%)	5 (35.71%)
	Asian or Asian American	43 (3.82%)	25 (58.14%)	18 (41.86%)
	Black or African American (Black)	504 (44.76%)	284 (56.35%)	220 (43.65%)
	Hispanic or Latino (Latinx)	119 (10.57%)	72 (60.50%)	47 (39.50%)
	Native Hawaiian or Pacific Islander	3 (0.27%)	3 (100.00%)	0 (0.00%)
	Other	14 (1.24%)	5 (35.71%)	9 (64.29%)
	Two or more races	47 (4.17%)	21 (44.68%)	26 (55.32%)
	White	371 (32.95%)	216 (58.22%)	155 (41.78%)
	International	11 (0.98%)	4 (36.36%)	7 (63.64%)
First-generation status				
	First-generation	463 (41.12%)	254 (54.86%)	209 (45.14%)
	Continuing generation	663 (58.88%)	385 (58.07%)	278 (41.93%)

Variables		Total ¹	Paid	Unpaid
Family annual income				
	Lower than \$100,000	843 (25.13%)	475 (56.35%)	368 (43.65%)
	\$100,000 or higher	283 (74.87%)	164 (57.95%)	119 (42.05%)
Academic and institutional characteristics				
Major				
	Business	216 (19.18%)	172 (79.63%)	44 (20.37%)
	Communications, Media, and Public Relations (Comms)	81 (7.19%)	25 (30.86%)	56 (69.14%)
	Arts and Humanities (Humanities)	112 (9.95%)	54 (48.21%)	58 (51.79%)
	Social Sciences	160 (14.21%)	62 (38.75%)	98 (61.25%)
	Social Service Professions (Social Service)	166 (14.74%)	31 (18.67%)	135 (81.33%)
	STEM	344 (30.55%)	269 (78.20%)	75 (21.80%)
	Other majors	47 (4.17%)	26 (55.32%)	21 (44.68%)
Minority-serving Institution Type				
	HBCU	518 (46.00%)	299 (57.72%)	219 (42.28%)
	HSI	137 (12.17%)	59 (43.07%)	78 (56.93%)
	PWI	471 (41.83%)	281 (59.66%)	190 (40.34%)
Employer characteristics				
Employer Organization Type				
	Government	253 (22.47%)	142 (56.13%)	111 (43.87%)
	Non-profit	440 (39.08%)	173 (39.32%)	267 (60.68%)
	For-profit	433 (38.45%)	324 (74.83%)	109 (25.17%)

1 The percentages indicate proportions relative to the total sample (n = 1,126).

2 The percentages indicate proportions within each group.

Table 1. Features of the study sample including internship pay (n = 1,126)

Some notable findings from the descriptive statistics are as follows. Interpreting these data, however, we must keep in mind the small sample sizes of some sub-groups and the over-sampling of Black students. First, in examining how student demographic characteristics are associated with internship pay, the data indicate considerable differences by gender. Specifically, 32.84% of the male interns were unpaid while 47.41% of female interns were unpaid. Differences among racial identities were also observed, with the largest proportion of unpaid internships among international students (63.64%), other students of color (47.93%), and Black students (43.65%).

Second, the proportion of paid and unpaid internships varied depending on the academic characteristics of student respondents. For instance, only 20.37% of students with business majors and 21.80% of STEM major students had unpaid internships, while the proportion of unpaid interns ranged from 44.68% (Other majors) to 81.33% (Social Service Professions) in other majors. The findings also showed that a smaller proportion of students at PWIs (40.34%) were unpaid compared to students at HBCUs (42.28%) and HSIs (56.93%). Finally, when considering employer characteristics, 25.17% of students who interned in for-profit companies

were unpaid, while larger proportions of interns in government agencies (43.87%) and non-profit institutions (60.68%) were not compensated.

RQ2. Which individual, institutional, and employer characteristics predict internship compensation?

Next, we conducted multiple linear probability analyses to examine which characteristics predict participation in unpaid internships. Five different models were tested as part of the analysis, with the first model (Model 1) including all study variables, the next three models (Models 1A, 1B, and 1C) including interaction terms, and a final model that tested all statistically significant variables in a single, more parsimonious analysis (Model 2) (see Table 2).

	Model 1	Model 1A	Model 1B	Model 1C	Model 2
Intercept	.866 (.035) ***	.860 (.036) ***	.856 (.035) ***	.884 (.035) ***	.757 (.048) ***
Demographic characteristics					
Gender (RG: Male)					
Female, Transgender, and Other gender (FTO)	-.018 (.028)	-.003 (.034)	-.017 (.028)	-.020 (.028)	-.006 (.034)
First-generation status (RG: Continuing generation)					
First generation	-.014 (.026)	-.014 (.026)	-.012 (.026)	-.009 (.026)	-.009 (.026)
Family income (RG: \$100k or higher)					
Lower income	.030 (.030)	.026 (.030)	.019 (.030)	.031 (.030)	.026 (.030)
Race (RG: White)					
Black	.040 (.044)	.044 (.044)	.040 (.044)	-.047 (.060)	-.045 (.061)
Latinx	.134 (.051) **	.138 (.051) **	.130 (.052) *	.012 (.074)	.017 (.073)
Other SoC	-.015 (.045)	-.011 (.048)	-.016 (.045)	-.044 (.056)	-.042 (.056)
International	-.128 (.131)	-.121 (.138)	-.108 (.133)	.014 (.140)	.020 (.142)
Academic and institutional characteristics					
Major (RG: STEM & Business)					
Comms	-.435 (.055) ***	-.457 (.124) ***	-.479 (.092) ***	-.439 (.055) ***	-.445 (.123) ***
Humanities	-.295 (.050) ***	-.156 (.085) +	-.264 (.070) ***	-.300 (.050) ***	-.160 (.085) +
Social Science	-.345 (.043) ***	-.329 (.090) ***	-.250 (.084) **	-.347 (.042) ***	-.336 (.088) ***
Social Service	-.516 (.039) ***	-.478 (.084) ***	-.465 (.104) ***	-.507 (.040) ***	-.478 (.085) ***
Other major	-.206 (.071) **	-.387 (.130) **	-.071 (.105)	-.194 (.069) **	-.383 (.130) **
Minority-serving status (RG: PWI)					
HBCU	.005 (.043)	.000 (.044)	.004 (.044)	-.194 (.095) ***	-.206 (.099) *
HSI	-.135 (.048) **	-.143 (.048)	-.133 (.049) **	-.298 (.073) *	-.305 (.075) ***
Employer characteristics					
Organization type (RG: For-profit companies)					
Government (Govt)	-.124 (.035) ***	-.126 (.035) ***	-.048 (.042)	-.121 (.035) ***	-.123 (.035) **
Non-profit (NPO)	-.243 (.033) ***	-.241 (.033) ***	-.242 (.044) ***	-.238 (.033) ***	-.237 (.035) ***

	Model 1	Model 1A	Model 1B	Model 1C	Model 2
Interaction terms					
Gender × Major (RG: Male STEM & Business)					
FTO & Comms		.022 (.137)			.003 (.137)
FTO & Humanities		-.193 (.104) +			-.194 (.104) +
FTO & Social Science		-.023 (.100)			-.017 (.100)
FTO & Social Service		-.049 (.091)			-.038 (.091)
FTO & Other major		.248 (.153)			.260 (.152) +
Major × Internship sector (RG: STEM & Business for-profit)					
Comms & Govt			-.021 (0.224)		
Comms & NPO			.103 (.119)		
Humanities & Govt			-.212 (.130)		
Humanities & Non-profit			.025 (.112)		
Social Science & Govt			-.165 (.118)		
Social Science & NPO			-.110 (.104)		
Social Service & Govt			-.181 (.122)		
Social Service & NPO			-.004 (.116)		
Other major & Govt			-.257 (.183)		
Other major & NPO			-.169 (.157)		
Race × MSI status (RG: White PWI)					
Black & HBCU				.268 (.111) *	.277 (.115) *
Latinx & HBCU				.465 (.133) ***	.475 (.135) ***
Other SoCs & HBCU				.207 (.128)	.216 (.130) +
Latinx & HSI				.296 (.128) **	.293 (.113) **
Black & HSI				.311 (.139) *	.313 (.142) *
Other SoCs & HSI				.181 (.126)	.185 (.127)

Note: Values in parentheses are robust standard errors; +p < .10, *p < .05, **p < .01, ***p < 0.001
 Outcome variable: Internship compensation (1 = Paid; 0 = Unpaid)

Table 2. Results from linear probability model of internship compensation

Model 1 results indicate that one demographic (i.e., race), both academic and institutional (i.e., major, MSI status), and the employer characteristic (i.e., organization type) are each significantly (p < .01) related to the likelihood of participating in a paid internship. We added interaction terms suggested by the literature, finding that the interaction terms included in Model 1A (gender and major) and Model 1C (race and MSI status) revealed statistically significant results (ranging from p < .10 to p < 0.001), while those in Model 1B (major and employer organization type) did not. These results were used to build the final model (Model 2) that included two significant interaction terms.

Model 2 results show that when all other variables are held equal and the two significant interaction terms

are included, none of the demographic characteristic variables (e.g., gender, first-generation status, family income, and race) are by themselves significant predictors of internship compensation. However, the results do reveal that some academic and institutional, and employer characteristics remain as significant predictors. For academic majors all categories except Humanities were significant at the $p < .05$ level or below, indicating for instance that male students majoring in Social Services (SE=.085) have a 47.8% reduced probability of participating in paid internships than their STEM and Business major counterparts. Other majors with lower probabilities of being paid interns than STEM and Business majors include Communications (SE=.123), Other Majors (SE=.123), and Social Science (SE=0.088) majors who are 44.5%, 38.3%, and 33.6% less likely to be paid, respectively.

When interaction terms are included in the model, no demographic variables are significant predictors of internship compensation.

Additionally, MSI status significantly predicted internship pay, with white students attending HSIs (SE=.075) and HBCUs (SE=.099) being 30.5% and 20.6% less likely to be paid at their internship than white students attending a PWI. Finally, employer characteristics were also significant predictors, with students participating in internships at non-profit organization having a 23.7% decreased probability of getting compensated for their work (SE = 0.035), and government (SE=0.035) interns being 12.3% less likely to be paid than interns at for-profit companies.

Next, to examine the relationships between specific items within these categories, we conducted pairwise comparisons of the least-square means of each term for the two interaction terms included in Model 2 (see Table 3).

Subject	Level 1	Level 2 Contrast	Mean difference (Robust SE)	t-ratio Sig.
Gender × Major	Business & STEM	Female, Transgender, and Other gender (FTO) - Male	-.006 (.035)	-0.171
	Comms	FTO - Male	-.002 (.133)	-0.019
	Humanities	FTO - Male	-.200 (.099)	-2.021 *
	Social Science	FTO - Male	-.023 (.094)	-0.245
	Social Service	FTO - Male	-.044 (.085)	-0.606
	Other major	FTO - Male	.254 (.148)	1.721
Race × MSI Status	White	HBCU - PWI	-.206 (.099)	-2.077
		HSI - PWI	-.305 (.075)	-3.515 ***
		HSI - HBCU	-.099 (.118)	-0.846
	Black	HBCU - PWI	.071 (.060)	1.186
		HSI - PWI	.008 (.121)	0.064
		HSI - HBCU	-.064 (.112)	-0.569
	Latinx	HBCU - PWI	.269 (.093)	2.879 *
		HSI - PWI	-.013 (.086)	-0.146
		HSI - HBCU	-.281 (.083)	-3.411 **

Subject	Level 1	Level 2 Contrast	Mean difference (Robust SE)	t-ratio Sig.
Race x MSI Status	Other SoCs	HBCU - PWI	.010 (.086)	0.121
		HSI - PWI	-.120 (.104)	-1.157
		HSI - HBCU	-.130 (.114)	-1.147
	PWI	Black - White	-.045 (.061)	-0.749
		Latinx - White	.017 (.073)	0.232
		Latinx - Black	.062 (.088)	0.708
		Other SoCs - White	-.041 (.056)	-0.75
		Other SoCs - Black	.003 (.073)	0.05
		Other SoCs - Latinx	-.059 (.086)	-0.688
		HBCU	Black - White	.232 (.097)
	Latinx - White		.492 (.115)	4.276 ***
	Latinx - Black		.260 (.067)	3.9 ***
	Other SoCs - White		.174 (.117)	1.485
	Other SoCs - Black		-.057 (.072)	-0.802
	Other SoCs - Latinx		-.317 (.093)	-3.426 **
	HSI	Black - White	.267 (.130)	2.066
		Latinx - White	.309 (.086)	3.607 **
		Latinx - Black	.042 (.119)	0.353
		Latinx - International	.289 (.133)	2.174
		Other SoCs - White	.143 (.115)	1.246
		Other SoCs - Black	-.124 (.142)	-0.879
		Other SoCs - Latinx	-.166 (.104)	-1.607
		Other SoCs - International	.123 (.154)	0.797
		International - Black	-.247 (.165)	-1.501
International - White		.020 (.142)	0.144	

Note: Šidák correction was used.
 +p < .10, *p < .05, **p < .01. ***p < 0.001

Table 3. Pairwise comparison test results for the interactions in the final model (Model 2)

Results of this analysis showed that students who identify themselves as female, transgender, or other gender who are pursuing a humanities major have a 20.0% lower probability of getting paid for their internships compared to male students in the same major (SE = 0.099). Additional analyses for race and MSI status interactions resulted in several significant differences between groups and institutions. However, due to the extremely small sample size of particular groups (e.g., only six Latinx students were attending HBCUs in our sample, and only seven Black students were attending a HSI), we highlight here only relationships that include more than 20 students. The results indicate that white students in HSIs had a 30.5% reduced probability of being compensated for their internships than white students in PWIs (SE = 0.075), and Latinx

students in HSIs also had a 30.9% increased probability of being paid when compared to white students in HSIs (SE = 0.086).

An additional analysis was conducted to explore why gender was not a significant factor in the models, as gender has been consistently a significant factor in predicting internship compensation in the literature. We found that female, transgender, and other gender students had significantly reduced probability of being paid for their internships than their male counterparts, but this effect was significant only when examined without students' academic majors. In other words, the significance of gender to the problem of internship compensation disappears when academic major is considered.

Discussion

Our goal in this paper was to contribute new empirical and theoretical insights into a pressing national problem in higher education that many fear may be disproportionately and negatively impacting many students' current and future well-being and social mobility – the prevalence of unpaid internships. Given mounting concerns that unpaid internships are potentially illegal (Curiale, 2009), of lower quality than paid positions (Rogers et al., 2021), and especially deleterious to under-served groups who have historically been marginalized in the labor market (Torpey-Saboe et al., 2022), the lack of data has hindered the ability of the postsecondary sector to ascertain with any precision the scale and nature of these programs, and to then formulate an evidence-based response.

In the remainder of this paper, we highlight key findings from the study, which should be interpreted in light of several limitations that include selection bias, oversampling of students of color and MSIs, and issues with measurement and re-coding particular demographic variables. Future scholarship in this area should address these limitations, while also pursuing mixed-methods research that can elicit more granular and emic insights from key decision-makers – students, educators, and employers – about their experiences with unpaid internships, particularly the reasons why students continue to pursue them and employer decisions regarding compensation.

We conclude this paper with an evidence-based strategy for dismantling the systems, policies, and practices supporting unpaid internships in U.S. higher education. This strategy is based on the data reported in this paper and the results from a scholar-practitioner symposium hosted by [NAME OF CENTER] at [NAME OF UNIVERSITY] in April of 2022 that highlighted proven approaches to funding unpaid internships across the country. In this way, we aim to address the long-standing concerns with the exploitative nature of unpaid labor and the potential of intersectionality theory to advance a “transformative social justice” (Harris & Patton, 2019, p.394). Ultimately, we contend that the postsecondary sector should cease its unequivocal advocacy for internships as a “high-impact practice” until and unless it can drastically reduce if not eliminate the number of unpaid positions, and that future efforts towards this goal should target specific majors and student populations while also encouraging more accessible modes forms of work-integrated learning in the classroom.

Finding #1: The scale of unpaid internship participation in MSIs is considerable

One of the most important sources of evidence required for answering a scientific question is baseline data

Our results indicate that approximately 1 in 3 student interns are not paid.

on the size, scope, or scale of a phenomenon (Loeb et al., 2017). In the case of unpaid internships, while prior research has offered varying percentages of the internship labor market comprised of unpaid positions (e.g., 47% in NACE, 2020; 58.1% in Hunt & Scott, 2020), few rigorous, multi-institution field studies focus on U.S., higher education, particularly among a sample that features high

numbers of MSIs and students of color. Our results indicate that approximately one in three college student interns attending four-year institutions are not paid – a vast number indicative of a widespread problem. But our study also shows that the field should not assume that all students, disciplines, institutions, and employer types are uniformly engaged in these experiences.

Finding #2: The distribution of unpaid internships varies by student, institution, and employer types

Our descriptive results suggest that participation in unpaid internships varies considerably within the three major actor groups highlighted in our study based on gender, major, MSI status and other variables, echoing findings from previous research. However, our results are inconsistent with prior studies that found gender, first-generation status, race, and family income to be significant factors predicting internship compensation (Frenette, 2015; Zilvinksis et al., 2020). The influential role of these factors, particularly that of family income, has provided the foundation for the argument that a lack of financial resources and/or social capital is the primary reason why unpaid internships are problematic (Curiale, 2009; Perlin, 2012). Further, the fact that more female students are unpaid interns raises fears about the normalization of low wages in a labor market where a gender wage gap persists (AAUW, 2020; Shade & Jacobson, 2015). Yet these two variables were not statistically significant in our analysis, and appear to be less influential than major, MSI status, and organization type in this study sample.

In fact, our study provides the first empirical evidence that MSI status matters with respect to internship pay, with our second model (Model 2) revealing that white students attending HBCUs and HSIs are 20.6% and 30.5% less likely, respectively, to be paid interns than white students attending a PWI. The potential role that an institution's MSI status may play in determining the number of paid or unpaid internships available to their students merits further study, and here we can only speculate on possible mechanisms behind this finding. Prior work on internships in HSIs generally does not shed light on compensation issues, as their focus has been on topics such as workforce diversification (e.g., Fedynich et al., 2012; Mendez et al. 2016), developmental impacts on interns (Adamczyk et al., 2022), or processes of professional socialization (Nelson & Jackson, 2003), with scholarship on internships in HBCUs similarly not addressing the phenomenon of intern wages (e.g., Strayhorn, 2020).

However, before we consider this finding in greater detail, we contend that while these results reinforce the fact that a select few variables appear to be strongly associated with internship pay, any “single-axis” accounts ignore the prospect that multiple, intersecting variables may be at play in shaping (or constraining)

Our study provides the first empirical evidence that MSI status matters with respect to internship pay.

students' access to opportunities like paid internships (Nuñez, 2014).

Finding #3: Variability in unpaid internships implicates intersecting factors across role groups

Our analyses that included interaction terms (Model 2) as well as subsequent post-hoc comparisons show that when interaction terms for race and MSI status are included, the earlier finding regarding Latinx students being more likely to be paid interns than white students no longer holds, suggesting that the variability observed in Model 1 for this racial/ethnic group can be explained in part by their attendance at a particular type of institution. This suggests that the MSI status of an institution should be a primary consideration when discussing the prospect that students of color are more or less likely to pursue an unpaid internship. However, our post-hoc comparisons reveal that the effects of MSI enrollment evident in our data may be concentrated in particular groups of students. Specifically, white students attending a HSI are 30.5% less likely to be paid interns than their counterparts at a PWI, while Latinx students at a HSI are 30.9% more likely to be paid interns than white students also attending a HSI. The data indicates that affiliation with HBCU was not associated with any noticeable difference in internship compensation for student groups represented by 20 or more respondents in our study.

What is happening here? These data suggest that attending a MSI for specific racial or ethnic groups – particularly Latinx and white students at HSIs - has both positive and negative impacts on whether they have a paid or an unpaid internship. The positive benefits accruing to Latinx students attending HSIs are considerable and reinforce the mission of these MSIs as providing uniquely supportive environments for academic and post-graduate success for students of color. How the work-based learning support systems and initiatives designed for students of color, such as those aimed at boosting professional self-esteem for populations that are often denigrated as not being “college material” (e.g., Sweeney & Villarejo, 2013) or encouraging students of color to enter white-dominated professions such as geography (e.g., Fedynich et al., 2012), should continue to be studied and encouraged. But is it also possible that white students attending HSIs somehow have more limited access to paid internships than Latinx students and other students of color?

The data suggest that attending a MSI for specific racial or ethnic groups - particularly Latinx and white students at HSIs - has both positive and negative impacts on internship pay.

While some research exists on whether higher proportions of white students at a HSI is associated with the degree of funds an institution receives (Vargas, 2018) - the answer being yes, which supports the notion that institutional funding is racialized and rewards a MSIs “proximity to whiteness” (p. 3) - no research exists on the experiences of white students at HSIs regarding work-based learning in general. Whether these students represent privileged communities, or they are predominantly from low-income and/or first-generation populations is an important question, as the latter group would merit special attention given the known exclusionary nature of unpaid internships for students in these typically under-resourced groups (e.g., Author et al., 2022). In posing these questions, we are not suggesting that white students in general or that white students attending HSIs should be the primary focus of future research, policy, and practice, as the persistent inequalities in funding, access, and student persistence and completion in MSIs and for students of color is

indisputable (see Espinosa et al., 2018). Instead, we highlight an empirical finding from our study, which raises questions for future inquiry and for institutional leaders and career services professionals at MSIs. Finally, we consider the interaction term of gender and major, which we had anticipated would be significantly associated with internship pay given prior research and our own results that indicated the prominent role that both variables played in Model 1. However, this interaction term was not statistically significant, and additional analyses revealed that gender was a significant factor only when examined without major entered in the model. This result indicates that the gender effect may actually be a major effect. Thus, while attention on internship pay in majors with high rates of female enrollment may be warranted (e.g., education, nursing, social work), our data suggest that another cluster of majors may be of particular concern – the arts and humanities. Our post-hoc pairwise comparisons did find that female, transgender, and other gender students in the humanities were less likely to be paid interns than male students in these majors, indicating both a gender and major effect within this disciplinary cluster. This finding is consistent with Frenette’s (2015) finding that more women than men have unpaid internships in the arts (e.g., architecture, art history, music, dance), which suggests that future research and campus-based interventions regarding internship wages should target women in these majors.

Ultimately, our use of a multi-actor, intersectional framework that delves into ways that student-, institution-, and employer-level factors interact to dictate internship wages helps to pinpoint precisely where the source of the problem of unpaid internships is concentrated. While there may be close to one million unpaid interns in the U.S., who are being asked (or required) to work without pay while also potentially undergoing considerable financial hardship, it is clear that this problem does not impact the entire population of college students uniformly. These results suggest that any responses to the potentially inimical impacts of unpaid internships or attempts to increase the number of paid positions, may need to be focused on specific student groups, majors, and organization types instead of being a campus-wide initiative.

An evidence-based strategy for dismantling the systems supporting unpaid internships

Much of the debate surrounding unpaid internships is around eliminating them outright, based on the notion that they are potentially illegal (Curiale, 2009), of lower quality than paid internships (Rogers et al., 2021), fundamentally unethical since labor should be compensated (Allen et al., 2013; Hope & Figiel, 2013; Perlin, 2012) and are unfairly excluding groups of under-resourced students from pursuing these potentially transformative opportunities (Author et al., 2022; Torpey-Saboe et al., 2022). While concerns exist that a

We offer a 6-step strategic plan for dismantling the systems and structures that enable unpaid internships in U.S. higher education.

unilateral abolishment of unpaid internships would unfairly harm students in fields that require them for graduation (e.g., teacher education, social work, counseling psychology) and may have no readily available sources of funding, we contend that the risk to students in these fields is outweighed by the potentially deleterious effects of unpaid labor on the entire student population.

Thus, we offer a six-step strategy for dismantling the systems and

structures that enable unpaid internships to persist in U.S. higher education. This strategy is grounded in two sources of evidence – the data reported in this paper and a symposium in April of 2022 that focused on the problem of unpaid internships (<https://ccwt.wisc.edu/>). This symposium featured the collective wisdom of scholars and practitioners who shared proven strategies for funding unpaid internships from postsecondary institutions, government agencies, and employers from across the nation.

Strategy 1. Ban unpaid internships across entire institutions

First, we contend that all colleges and universities should immediately ban unpaid internships and make it a campus policy to not advertise positions with companies, organizations, or government agencies who do not fund student labor. Some campuses have such policies in place already, which sends a clear and pointed message to both employers and students – that labor should be compensated, period. In cases where such policies will present difficulties for majors where employers lack budgets to pay student interns (e.g., arts, social work), institutions will need to immediately step in and provide subsidies for students pursuing internships in these fields, particularly if they are required by accrediting bodies and/or for graduation. Despite this not inconsiderable challenge, however, banning unpaid internships is a first and obvious step in leveraging institutional power to dismantle systems of oppression, exclusion, and gatekeeping.

Strategy 2. Explore Federal Work Study (FWS) and ways to make students' employment more educational

The FWS system is a federal government financial aid program that provides up to 75% of a part-time student employee's wage, with institutions providing the remaining 25% for part-time jobs that traditionally have been on-campus positions. In 2019 the FWS began funding off-campus employment, and currently students with jobs that are considered "in the public interest" are eligible for FWS funds (Department of Education, 2022). Consequently, many campuses are encouraging eligible students who find unpaid internships in the non-profit or government sectors to pursue these employment opportunities. In addition, the Job Location and Development and the Work College programs of FWS are expanding the types of jobs (e.g., private employers) that students receiving work study funds can pursue. While campuses must perform due diligence to ensure that these positions are in fact learning opportunities and not solely paid employment with no educational value, FWS is a strategy that campuses should be pursuing to increase the number of paid internships for their student body.

Further, some campuses with high rates of working students are exploring ways to add an educational component to these positions, such as encouraging major-related jobs or guiding students through reflective interviews and writing about their career goals (Field, 2017; Perna & Odle, 2020). Ultimately, with 23.7% of undergraduate students working full-time and 21.0% working part-time jobs, and 70% of students not able (or desiring) to pursue an internship (Author et al., 2021), figuring out how to make these paid positions opportunities for making connections between coursework and their jobs, developing transferable skills, or exploring their career interests should be a national priority.

Strategy 3. Immediately launch a coordinated and multi-pronged fundraising campaign

One of the more obvious reactions to the unpaid internship problem is to secure funding for them so that all student interns are paid. The primary responsibility for paying for labor – whether students are formally classified as employees or not – should lie with the employer. However, in cases where employers simply

lack the budget to pay for additional staff, postsecondary institutions should immediately launch fundraising campaigns with diverse partners that target multiple funding streams. Engaging diverse partners means coordinating across campus with different units such as alumni relations, career services, and development offices to ensure that donors or companies are not deluged with multiple requests. Then, campuses should coordinate efforts with local Chambers of Commerce, philanthropists, and sector-specific organizations (e.g., regional information technology boards) to raise funds. Particularly successful strategies outlined in the symposium included fundraising among alumni networks, Chamber-based initiatives, and working with regional, state, or the federal government.

Strategy 4. Encourage government to fund their internships and fund industry-specific internships

Unpaid internships in government agencies, particularly in high-profile Congressional offices and the White House, have long been critiqued for unfairly excluding low-income, first-generation, and/or students of color from positions that are often steppingstones to prestigious graduate programs or full-time positions (e.g., Jones, 2020). Thus, news that the U.S. State Department and the White House in 2022 effectively banned unpaid internships and appropriating funds for these programs was a game-changing development in the internship labor market. Pressure is on other federal agencies and state governments to follow suit, and this is one area where higher education can encourage governments who hire their students to begin paying them for their work.

Additionally, state and local governments can also allocate funding to subsidize internships in specific populations and/or industrial sectors to expand and diversify the labor pool in targeted occupations. For example, the University of Maryland Baltimore County worked with the state of Maryland to launch (and fund) the Maryland Technology Internship Program, which subsidizes students interning in small businesses in the state's growing technology sector (University of Maryland, n.d.). Such programs are designed to discourage unpaid internships while also supporting small business and growing the local workforce in specific industrial sectors.

Strategy 5. Engage in outreach to specific groups of students identified in this study

While each of the aforementioned strategies is being used in the field of higher education, what this paper contributes is the strong recommendation that they be targeted to support specific groups of students and institutions identified in this study – namely female students, those enrolled in non-STEM or Business majors, MSIs, and internships in the government and non-profit sectors. Additionally, while the data highlight the need to support white students attending HSIs, we contend that efforts should also focus on supporting all students of color seeking internships, given pervasive structural barriers and hiring discrimination that these students invariably will face. Last, while family income was not a significant finding in this analysis, we argue that the harmful impacts of unpaid work are of particular concern to low-income students, and thus include these students as one of the groups that campuses should be focusing their efforts upon when funding unpaid positions.

Strategy 6. Expand classroom-based work-integrated learning to make experiential education more accessible

Finally, we cannot emphasize enough the fact that only 30% of all college students successfully pursue an

internship (NCES, 2017; CCWT citation), which means that 70% of the nation's students are not benefiting from this experience. Thus, we argue that the field should not continue the uncritical advocacy of internships as a HIP until and unless the participation rate is much higher. Until then, alternatives that are more equitable and accessible must be pursued, and one solution being pursued in colleges and universities around the world is classroom-based work-integrated learning (WIL) (see Jackson, 2015). Through activities such as employer class visits, field trips, problem-based learning, or capstone experiences, which engage students with authentic tasks, situations, and personnel, all students within a course can benefit from these experiential learning experiences. Simply put, internships are and will continue to act as a gatekeeping mechanism screening out certain members of society from the professions, but WIL is a far more equitable and democratic way to bring the benefits of experiential learning into the nation's higher education system. With these practical and proven strategies in mind, we suggest that with the support and advocacy of

campus leadership, the exclusionary and harmful nature of unpaid internships can be mitigated, and someday eliminated once and for all from the nation's colleges and universities.

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