Charting Salary Bubbles in the Republic of NGOs: Introducing Conditional-Wages to Explain What Employers Want and How They Get It

Anthony J. DeMattee
Indiana University, Ph.D. Student
Joint Ph.D. in Public Policy
demattee@indiana.edu

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Suggested Running Head: *Introducing Conditional-Wages to Explain What Employers Want and How They Get It*

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ABSTRACT

Using the case of Haiti, this study explores the origins and durability of wage differentials across organizational types. We review four theories that predict salary. Two are predominately employee-centered and rely heavily on rigid sectoral differences. Others are employer-centric approaches that privilege extra-organizational factors. Combining the latter introduces the conditional-wage hypothesis. Its formal hypotheses are carefully tested against original data collected from expert respondents of 122 formal employers in Haiti. Over two observation periods (2011, 2016), participants provide 1,309 individual-level responses for salary, position, and qualifications, which are combined with organizational data and analyzed using a cross-classified random effects model. The findings reject the application of labor-donation theory to the complex and uncertain environment of Haiti, and identifies only one employer type that pays a significant and robust salary premium. These findings are interpreted through the conditional-wage hypothesis framework and their broader implications are discussed.

Keywords: Haiti, labor donation, Nongovernmental Organizations (NGOs), development, humanitarian assistance

Introduction

What effect has the protracted and intense involvement of NGOs in Haiti had on the country? Many engage this divisive topic through analysis of proximal NGO-outcome relationships such as whether NGO activity has been effectively coordinated (e.g., Heath, 2014), through careful and critical assessment of the actions of NGOs as individual actors and players within a larger foreign aid system (e.g., Schwartz, 2008, 2017), or through deeper evaluations and prognostications of the long-term prospects of the country (e.g., Dupuy, 2010; Sutton, 2013). This article engages the topic of salaries in Haiti and presumes they have indirect and distal effects on the oft-studied topics above. A common belief among Haitian citizens and foreign visitors is that NGOs pay higher salaries than other employers for the same job. This belief is summarized in a statement made by Haitian-born, American-educated, trilingual, IT professional working for an American NGO, "NGOs pay much higher wages for a particular position than for-profit businesses. Some pay two, three, or four times as much" (2011). While informal sources support the hearsay that NGOs pay higher wages many disagree on the details, specifically the causes, magnitude, and durability of the premium.

Private, nonprofit organizations play a crucial role in developing countries around the world. Haiti is one such country. Individuals in advanced industrialized countries have donated time and talent to Haiti through a wide variety of westernized, international nongovernmental organizations (INGOs) since before Hurricane Hazel ravaged the tiny nation in 1954. That act of God, the first in an unfortunate series, spurred a "wave of 'development madness' [that swept] over Haiti" (Maguire, 1981, p. 21). But foreign assistance to Haiti predates Hurricane Hazel, as Fass (1988) explains: private aid to Haiti extends back to 1860 in the form of missionary entities (pp. 22-23), perhaps most notably the Catholic Church (Fauriol, 2014). He recounts these private voluntary nongovernmental organizations grew from 118 in 1976, to 400-500 in 1984. As time moved

forward the precise number of NGOs in Haiti became less certain. Scholars long committed to the study of the country estimate more than 10,000 NGOs have worked in Haiti for more than three decades (Fatton, 2011). More recently, estimates on the number present immediately after the January 2010 earthquake was reported to be as high as 12,000 (Karunakara, 2010), or approximately one NGO for every 850 Haitians, which is roughly four-times the 1977 per capita metric reported by Maguire (1981). The long-term, high involvement of NGOs in Haiti is well known and has earned the country its international reputation as "The Republic of NGOs" (e.g., Buss & Gardner, 2008, p. 119; Kristoff & Panarelli, 2010, p. 1) or as it's known locally "*La République des ONGs*, the NGO republic" (Fatton, 2011, p. 173).

Multiple stakeholders may benefit from knowing whether an NGO "salary bubble" exists in Haiti. Here, a salary bubble refers to an unexplained salary premium that exists among a category of employers when controlling for employer characteristics, position responsibilities, and employee qualifications. First, NGOs themselves may benefit from knowing that as a group they pay more than non-NGO employers. If it is true that NGOs pay two-times (or more!) the salary for an employee with certain qualifications vis-à-vis other employers that pay only the market wage, then NGOs may choose to pay only the market-clearing wage and reallocate the savings to other humanitarian or development programs, or add to a "buffer" that cushions the organization against deleterious changes in its environment (Cyert & March, 1963) and such organizational slack can assist an organization in adapting to uncertain and complex environments (Lawrence, 1993; Lawrence & Lorsch, 1967). An argument exists that if a manager chooses to offer a market-clearing wage she may increase the utility of a finite budget with a more economic allocation of expenditures.

Second, it is reasonable that Haitian public administration and for-profit organizations fear an NGO salary premium because they would be unable to retain skilled employees who can work for NGOs that pay more money for the same work. Haiti previously experienced a prolonged external brain drain during the Duvalier regimes (1957-1986) which compounded the challenges of corruption, political repression, and economic regression (Fauriol, 2014). Severe wage differentials, if they exist, could create an *internal* brain drain for Haiti with NGOs employing the most talented and capable members of the workforce and leave private firms and public administration with second- or third-tier employees. Some scholars view brain drains as producing positive effects on economic development with expatriate networks linking diaspora members with their countries of origin (Meyer, 2001) as well as possibly increasing average productivity and equality in the source economy (Mountford, 1997), which could possibly lead the lead a country out of an underdevelopment trap (Vidal, 1998). Others explain these "transnational migrant organizations" (Levitt, 1997) and "hometown associations" (Orozco & Lapointe, 2004) can simultaneously have positive and negative effects on their country of origin. But others, such as Kingma (2001), are less optimistic and suggest brain drain recruitment efforts have a negative long-term effects on the source country. To expand on Kingma's argument, if one type of organization is systematically paying a salary premium over other organizational forms then, *ceteris paribus*, that organizational type attracts employees from the private sector and retard economic growth; simultaneously, such wage disparities might entice public sector employees to leave they jobs and exacerbate "bad governance traps" (Collier, 2007) and inhibit state-building and effective public administration.

Finally, nonprofit scholars should be interested in the existence of an NGO salary premium because it would be contrary to traditional theory of nonprofit labor economics that argues

nonprofit organizations typically pay a salary discount. As described below, this donative-labor hypothesis posits two explanations for why nonprofit salaries may be lower than the other sectors. On the one hand, employees are willing to accept a lower salary because they receive non-pecuniary benefit from their work. On the other hand, the employer-centric argument suggests nonprofits strategically offer lower salaries to attract certain employees, minimize adverse selection, and increase mission alignment among staff. The major contributors to the labor donation literature limited their analyses to cross-sectional studies of government data of developed countries—first America followed by Western Europe—whereas this research here offers an original contribution to that literature with an analysis of longitudinal data collected from 122 formal employers in Haiti in 2011 and 2016.

This paper uses the case of Haiti to better understand the origins and durability of wage differentials across organizational types. Section 1 reviews four existing theories that predict salary. It then introduces the conditional-wage hypothesis and formally presents its three hypotheses. Next, it tests these formal hypotheses against original data from expert respondents of 122 formal employers collected over two observation periods separated by five years. After combining 1,309 individual-level responses with organizational-level data from employers, a cross-classified random effects model (CCREM) regresses salary on factors theoretically associated with compensation. Section 3 presents the results of the analysis, and Section 4 discusses these findings through the lens of conditional-wages. The final section concludes.

Literature Review

This research draws on theory from the literatures of public administration, nonprofits, labor economics, and organizational theory to predict wage differentials in Haiti. As shown in Figure 1, some of these literatures predict salaries using employers' legal form, while others offer conditional predictions that are sector agnostic. Even within sector-agnostic theories there is

disagreement on what factors are most important. This paper maintains that none of these theories are sufficient to predict salaries in complex and uncertain environments, and offers its own conditional theory on wage differentials. In the order presented these theories include public service motivation (Perry, 1997; Perry & Wise, 1990), labor donation (Leete, 2001; Preston, 1989), efficiency wages (Yellen, 1984), Contingency Theory (Burns & Stalker, 1961; Lawrence & Lorsch, 1967), and then introduces the conditional-wage hypohesis.

Figure 1: Theories of Salaries

Salary Premium	**Sector: Private**	**Sector: Public**
(+)	Efficiency Wages *Employer-centric; Sector agnostic; Privileges rationality*	Contingency Theory *Employer-centric; Sector agnostic; Privileges environmental factors*
(-)	Donative Labor Hypothesis *Generally employee-centric; Sector specific; Privileges employer sector and legal form*	Public Service Motivation *Generally employee-centric; Sector specific; Privileges employer sector and legal form*

Employee-Centric Approaches

A standard way of thinking about the topic of salaries and wage differentials has it that the mechanism for sub-market wages is contained within the employee, and specifically his motivations. These approaches look beyond financial compensation as the only compensation received by employees. Public service motivation, found primarily in the public administration and public management literatures, draws on themes of pride in one's nation and personal desires for public service. Labor donation, from the nonprofit literature, follows a similar reasoning, but substitutes 'serving the community' for 'service to country'. In both theories, the financial compensation received by employees is complemented by non-financial remunerations.

Public Service Motivation

In their study of American bureaucracy, Perry and Wise (1990) challenged the notion that monetary rewards singularly attract, retain, and sustain high-quality public workers. Their article began the research agenda of public service motivation (PSM), which is a concept focused around three core propositions: the greater an individual's PSM, the more likely they seek membership in a public organization; the degree of PSM is positively associated with individual performance in public organizations; and public organizations attract individuals with high levels of PSM and who are less dependent on utilitarian incentives to manage individual performance effectively. Perry (1997) suggests the antecedents of PSM include socialization from parents and religion, identification with the profession and political ideology, and certain individual demographic characteristics. Conclusive evidence for the existence of PSM is elusive and findings for its existence are mixed (Lyons, Duxbury, & Higgins, 2006; Rabin, Hildreth, & Miller, 2007). On the one hand, reasons for these mixed findings include the simultaneous existence of multiple centers of motivation—e.g., public service, mission, and task—within an individual person (Brewer & Selden, 2000; Rainey & Steinbauer, 1999), and whether the degree of PSM is a function of self-selection or organizational socialization (Moynihan & Pandey, 2007). In a twenty-year review of the concept, Perry, Hondeghem, and Wise (2010) conclude the rapid globalization of PSM jeopardized its conceptualization as a theoretical concept because it was applied too quickly to cultures that had different meanings for its central propositions.

Labor Donation

Early research attributes the existence of negative nonprofit wage differentials to the attitude of socially conscious workers that causes them to accept below-market wages when given the opportunity to work for organizations that benefit society. Preston (1989) was the first to offer the term "labor donation" (p. 439), which posits nonprofit employees are willing to accept reduced

wages to work for firms that generate positive social externalities. Later research, such as Leete (2000, 2001), built on the donative labor hypothesis and found greater wage equity within nonprofit organizations than within for-profit organizations due again to the differences in the mission, motivation, and activities generated by the society-friendly organization. Ruhm and Borkoski (2003) find, like Leete, when job characteristics and industry are controlled for, the labor donation effect vanishes. Currently, it is generally believed that nonprofit employees will voluntarily contribute to the organization by accepting a salary below market wage (Boris & Steuerle, 2006) because, as Jegers (2008) explains, the willingness to accept a lower wage exists if and only if the employee is compensated by the utility effect of doing "something 'good' for others“ (p. 45).

Several meaningful articles add to the explanation of labor donation from the perspective of employee motivation. Leete, in two large-N studies of the Public Use Microdata Sample (PUMS) of the 1990 US Census, found that wage equity is greater within the nonprofit versus for-profit sector (2000) and, contrary to Preston's work a decade earlier, the negative nonprofit wage differential is not economy-wide but instead varies by occupation and industry (2001). Narcy (2011) built on Preston's work by testing the donative labor hypothesis in the case of France using the French Labour Force Survey (1994-2001) and examining wage differentials across the nonprofit, for-profit, and public sectors. Narcy finds nonprofit employees in France were willing to work for discounted wages relative to the for-profit sector, and both the nonprofit and for-profit sectors experienced a negative wage differential as compared to the public sector.

More recently, in a theoretical article by Van Puyvelde, Caers, Du Bois, and Jegers (2012), nonprofit scholars use Stewardship Theory to argue labor donation need not be limited to intra-organizational arrangements and can be applied to inter-organizational relationships where

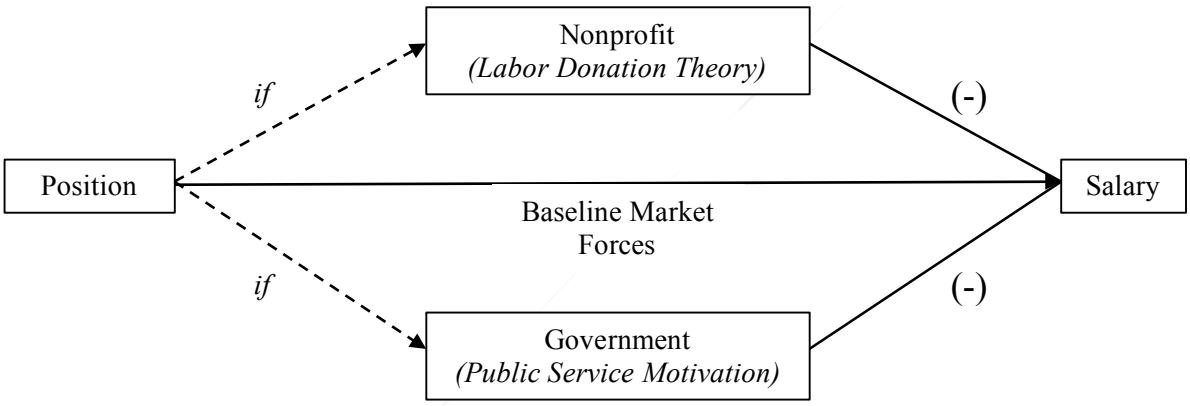
subcontractors may willingly provide a good or service to the nonprofit at a lower price because the agent receives utility by supporting the principal. Becchetti, Castriota, and Tortia (2013) use Italian social enterprise cooperatives to compare the effects of the "donative-labour hypothesis" and the "intrinsic motivation-productivity hypothesis" to explain variation in wages. The authors find evidence for both hypotheses but conclude the labor donation effect is overpowered by the motivation-productivity effect. They suggest employees who are intrinsically motivated are more productive and eventually achieve income levels that restore the earnings lost due to the initial labor donation. Bassous (2015) uses a two-phase mixed-methods design to explain employee motivation in terms of monetary and motivation factors. His study of three faith-based NGOs shows employees are motivated by nonmonetary incentives, leadership style, and organizational culture. Perhaps as importantly, and true to the original arguments of labor donation, he finds no meaningful relationship between motivation level and monetary incentives among the employees of faith-based NGOs (FBOs).

Qualitative research conducted by Knutsen and Chan (2015) identifies an extreme form of labor donation, "staff volunteering“, in which nonprofit employees voluntarily perform work for their employer that is unpaid. They report that at a highly reputable senior citizen service provider in Canada "staff volunteering" is commonplace. Finally, Lee (2015) researches American public and nonprofit managers and finds perception of underpayment decreases job satisfaction in both sectors. However, like the donative labor hypothesis where employees accept lower salary because of a non-pecuniary utility effect, Lee explains that the negative effect of perception of underpayment is overpowered by the positive effect of pride in one’s organization.

In summary, both PSM and labor donation are surely right that an individual’s motivation for the job they do affects both their motivation and performance. While this is certainly true to

some degree, empirical findings for each theory is mixed even when studied in the friendly confines of developed democracies. Unfortunately, neither literature has systematically tested their hypothesis in less-friendly contexts. For example, we know very little about PSM in non-democratic countries or weak/failing states. Similarly, labor donation has not been explored in contexts characterized by high unemployment, dire poverty, or weak civil society. Finally, because these theories place so much emphasis on intrinsic motivation, they leave little (if any) room in their theoretical models for contextual and environmental factors.

Figure 3: Theoretical Model for Employee-Centric Approaches



Theoretical Argument: Salaries are predicted by organization's legal form.

Employer-Centric Approaches

Alternative approaches to the study of salaries focus on the employer. These approaches presume that a certain level of financial compensation is necessary to attract/retain employees. Efficiency wages, based primarily in the assumptions of economics, turns to rational calculations of costs, cost-savings, and organizational efficiency. Contingency theory, from the organizational theory literature, emphasizes the environment as the impetus for organizational behavior and adaptation. Neither theory limits itself to one organizational legal form or context.

Efficiency Wages

Unlike the major streams of research in public service motivation and labor donation research projects who approach the study of salaries from the perspective of the individual, other scholars study wage differentials from the perspective of the organization. Handy and Katz (1998) assume *a priori* that "nonprofits tend to pay their managers a lower wage than for-profits" (p. 247) and use formal modeling to suggest the salary discount, which may be partially offset by fringe benefits, is a strategy used by nonprofit organizations to minimize adverse selection among applicants, attract hires who are committed to the mission of the organization, and generate positive self-selection among employees. Their work suggests that despite the discount nonprofit organizations can attract managers with productivity levels comparable to for-profit managers. This tactical use of salaries to manage applicants and staff is an extension of Yellen's (1984) efficiency-wage hypothesis. She explains that firms, in all sectors, may be inclined to pay workers more than the reservation, or market-clearing, wage required by potential replacements for reasons of organizational efficiency. For Yellen, this salary premium, or efficiency wage, is the result of organizational efforts to prevent employee shirking, reduce turnover and minimize training costs, attract high-caliber employees, and induce higher morale. In other words, higher costs to the organization in the form of payroll are offset by costs savings in hiring and training workers, and better overall organizational efficiency. Ito and Domian (1987) suggest salaries more than the economic reservation wage may be the result of the nonprofit organization's inability to observe effort levels and its desire to minimize employee turnover. They argue that a worker who is paid his reservation wage has little incentive to work hard because if he is caught shirking he can obtain a job at the same reservation wage at another employer. A worker who receives a salary premium, on the other hand, has greater incentive to work diligently because if she loses her job she is uncertain to obtain a comparable salary at another employer. The same is true for Handy and Katz

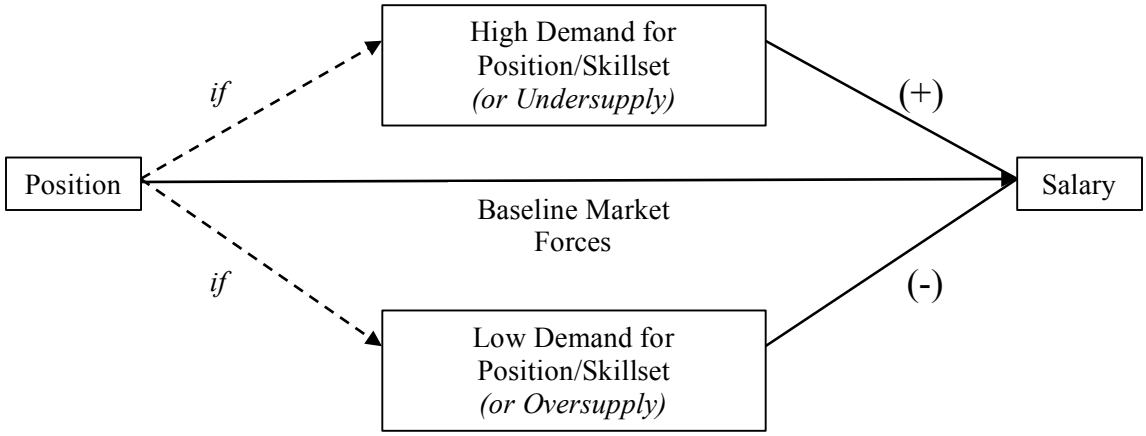
(1998) whose salary discounts serve to achieve the same organizational efficiency but is conditional on the employer's status as a nonprofit entity.

Just as all efficiency wages need not be positive, not all salary premiums are necessarily efficient. Lindauer and Sabot (1983) study wages under the Nyerere regime (1962-1985) using data from a 1971 Tanzanian household survey and found a distinct pattern of wage differences across employer groups. Although public employees tended to be more educated and from elite backgrounds, after controlling for worker characteristics public sector employees earned a substantial and unexplainable wage premium over private sector employees. Unfortunately, the data and research design were unable to offer definitive justification for the wage differentials: either, economically, public administration was *creaming* (i.e., paying a premium to attract the very best candidates from among a given level of education and experience); or, politically, public administration was distributing *monopoly rents* in Tanzania in the form of patronage in the guise of public employment. These findings are equally likely as Sklar (1979), writing in the same period, notes that in newly developing countries the single developed class marker is that of civil servants or members of the bureaucracy. In other words, employment in these areas is the primary means of capital accumulation for individuals.

In a similar study, Terrell (1993) used data from a 1987 survey of 564 employees in Haitian private, public, and state-owned enterprises (SOEs) to assess differences in salaries across sectors. She notes "Government salary policy has also created large disparities between the public and private sectors. In 1982, the average Haitian public servant earned roughly four times the minimum wage salary and eight times the GDP per capita" (p. 296). In her analysis of whether Haitian public servants earned a wage above the comparable private sector wage, she first found public sector workers were more likely to be from elite background, were more educated, and earned over three-

times the comparable private sector wages. Then, following Lindauer Sabot (1983), she investigated two possible explanations: *economic creaming* and *political monopoly rents*. She found that after controlling for education and professional experience, wages in the private sector are unexplainably far below both the public sector and SOE levels. She also found that public wages at SOEs were far above private and public administration levels. In other words, in the immediate post-Duvalier era of Haiti, the large public-private sector wage differentials that existed in Haiti were not because of economic creaming but because of political patronage. This form of clientelism is not discussed in her article, but some traces of the political quid-pro-quo are present and provide the conditions necessary for such monopoly rents: there are barriers to entry in the public sector, employee qualifications do not fully explain wages, public sector employees are from the elite class, and wages are an artifact of the recently expired Duvalier regimes.

Figure 4: Theoretical Model for Efficiency Wages



Theoretical Argument: Salaries are conditional on the supply/demand of employees and skillsets. Salaries are predicted by employer's rational calculation of long-run costs, cost-savings, and organizational efficiency.

Contingency Theory

The use of compensation as a device to advance an organization's strategic interests is not purely theoretical and has been noticed in developing countries. One example comes from Huff-Rousselle and Pickering (2001) who qualitatively compared two types of healthcare providers in

Phnom Penh, Cambodia. Their research compared service delivery and pricing between NGO and government providers and suggest better quality and access via the former. In a detailed account of this finding the researchers report:

> *"Discrepancy in salaries, with the [National Maternal and Child Health Center] providers receiving a monthly salary of between 15 and 25 US dollars while the [Reproductive Health Association of Cambodia] midwives receive 200-300 dollars and physicians receive 300-400" (p44).* The authors observe*, "[Ministries of Health] in developing countries generally, and in Cambodia particularly, act as a training ground, providing for the education and initial in-service training of almost all health professionals. Once they have acquired skills, the most competent government staff are often attracted away—in a 'brain drain' phenomenon—to staff foreign aid agencies, international NGOs and finally local NGOs when they offer better salaries and fringe benefits"* (p44).

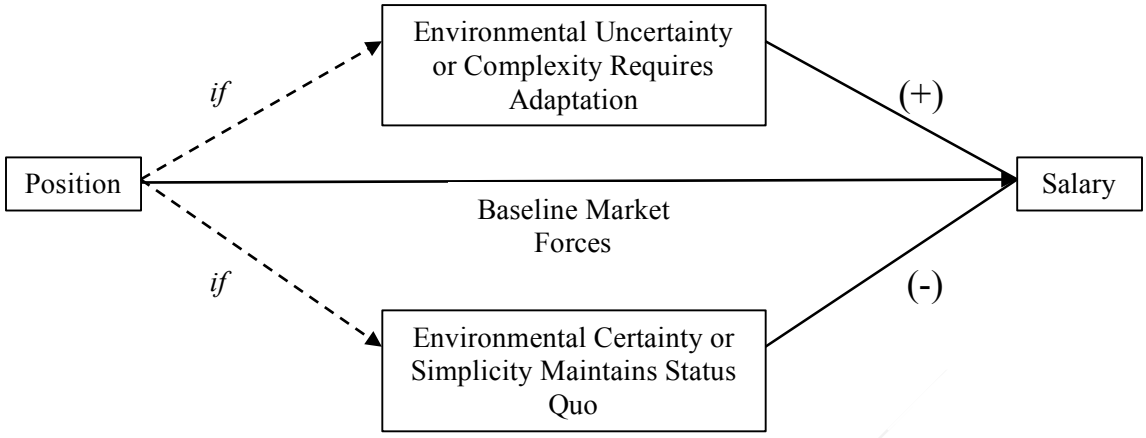
A more recent occurrence of an internal brain drain within developing countries is identified by Cailhol, et al. (2013) who studied the effects of global health initiatives (GHI) on local human capital in five countries in sub-Saharan Africa. The authors assessed how the President's Emergency Plan For AIDS Relief (PEPFAR), Global Fund for AIDS, Tuberculosis and Malaria (GFATM), and the Multi-country AIDS Program of the World Bank (MAP) affected the stock of qualified public sector staff in Angola, Burundi, Lesotho, Mozambique, and South Africa using a cross-national, multi-method study conducted from 2007-2011. Their study combined content analysis of policy, performance reports, and gray literature with data collected from over 500 national and subnational interviews. They found an unexpected, negative externality of GHI-funded programs to sub-Saharan Africa was the internal brain-drain experienced by all five countries who lost valuable public sector employees to foreign-funded NGOs. In all countries, they report, NGOs offered higher salaries than the public sector for qualified staff. This salary premium created a brain-drain of experienced staff from the public sector to the GHI-funded NGOs. Governments took several different actions to triage the brain the drain. One step was to harmonize salaries between NGOs and the public sector such as was carried out in Angola and Mozambique

by governmental decree, in South Africa by informal and local "anti-poaching" agreements, and in Burundi by forced alignment (Lesotho took no such action). Another step was to improve public compensation such as financial incentives for nurses in Lesotho and senior managers in Mozambique, and GHI-funded "top-ups" in Burundi.

Why would NGOs in Cambodia and Southern African countries pay a salary premium when labor-donation theory predicts otherwise? One possible explanation can be found in the widely-cited review by Watkins, Swidler, and Hannan (2012) who take an unorthodox approach of studying NGOs that privileges the special uncertainties they face due to the environments in which they function, as opposed to the alternative and outdated approach that views them a purely altruistic, cooperative, and flat.

Others agree NGOs are atypical nonprofits not only because of *where* they function but also *under* what institutions they operate. These institutions create incentives that shape and constrain their behavior, and they can be used to decipher the many counterintuitive activities that occur in the "NGO scramble" (Banks, Hulme, & Edwards, 2015; Cooley & Ron, 2002; Edwards & Hulme, 1996; Jarvik, 2007; Smith, 2005). Together, these literatures highlight both the uncertainties and complexities of NGOs' operating environment. These challenges condition organizational decisions at all levels, including salaries. The examples of the salary premiums from Angola, Cambodia, Burundi, Lesotho, Mozambique, and South Africa may simply be explained as NGOs motivated to adapt to their environment and whose decisions are shaped, at least in part, by the institutional incentives they face from the GHI-funders. From this approach, the tactical use of wages by NGOs to pursue organizational objectives is consistent with the theory of contingency (Burns & Stalker, 1961; Lawrence & Lorsch, 1967) in the organizational theory literature.

Figure 5: Theoretical Model for Contingency Theory



Theoretical Argument: Salaries are conditional on the matching requirements the employer faces from the environment. Salaries are predicted by immediate adaptation/matching requirements creating urgency in organizational behavior such as restructuring and hiring.

The factors important to Contingency Theory include size, technology, resources, uncertainty, and national and cultural differences (Lawrence, 1993). The theory has two primary streams. The first is predicated on organizational adaptation due to environmental uncertainty (Burns & Stalker, 1961). This school differentiates organizations as either *mechanistic* organizations whose clear hierarchy and specialized individual tasks positions them for success in stable and certain environments, or *organic* firms whose flattened hierarchy and less-defined tasks become assets in fluctuating, uncertain environments. The need for an *organic* organization seems more consistent with the thorough and recent guidance of the Watkins, Swidler, and Hannan review. The second school is based on adaptation caused by environmental complexity (Lawrence & Lorsch, 1967). Here, complexity increases as the environment changes more quickly and more frequently. Increasing environmental complexity generates a matching requirement for organizations that causes them to adapt with specialized subunits to the complex, heterogeneous environment. In turn, more specialized subunits are required as the environment becomes more complex. But each additional subunit increases organizational coordination costs and opportunities

for intra-organizational dysfunction and conflict. Therefore, the theory predicts organizations are not unnecessarily complicated and that the most successful organizations have structures optimized to meet the demands of their uncertain physical environment and the complexity of their institutional environment.

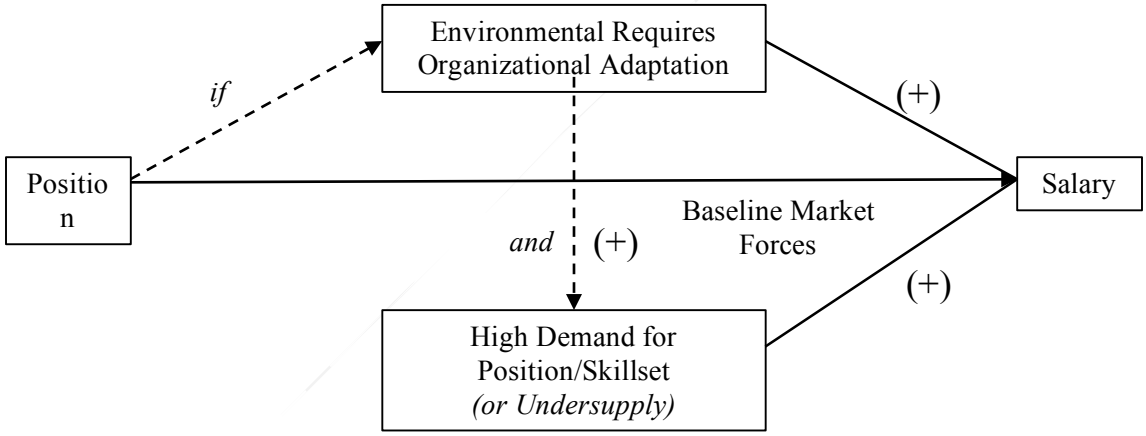
Figure 2 (continued): Theories of Salaries

Salary Premium	Sector: Private	Sector: Public
(+)	Efficiency Wages (employer approach) *Used tactically to prevent shirking, reduce turnover, minimize training costs, attract high-caliber employees, inspire higher morale; May manifest as a discount in the nonprofit sector*	Contingency Theory (employer approach) *Organizations adapt to meet the needs of their uncertain physical environment and the complexity of their institutional environment; Salaries are one of many forms of tactical adaptation; May manifest as either a premium or discount for either public or private organizations*
(-)	Donative Labor Hypothesis (employee approach) *Nonprofit employees accept reduced wages at firms that generate positive social externalities; Greater wage equity within nonprofit organizations; Can be applied to inter-organizational relationships such as contracting; Nonprofit employees voluntarily perform work for their employer that is unpaid*	Public Service Motivation (employee approach) *Individuals with high PSM are less dependent on monetary incentives; PSM is positively associated with performance in public organizations.*

To review and summarize, several theories exist that offer guidance as to how salaries in Haiti ought to trend. Some of these literatures use organizational legal form and sector to predict the salary patterns of formal employers. Specifically, public service motivation and labor donation explain that if a wage differential exists it is because employees agree to receive a salary discount because they are intrinsically motivated and compensated by the work they do. Unfortunately, these theories have mixed results in the context of developed democracies and have never, in a thorough review of the literature, been systematically tested in the context of developing countries. Other theories offer conditional predictions of wage differentials and are sector agnostic. Efficiency wages (Yellen, 1984) predicts employers tactically use salaries to hire the people they

need and want, and use above-market salaries to prevent shirking and turnover in pursuit of organizational efficiency. While efficiency wages emphasizes rationality and ignores context, Contingency Theory (Burns & Stalker, 1961; Lawrence & Lorsch, 1967) privileges the environment in which organizations exist as the pillar of its theoretical approach. In other words, Contingency Theory is strong where efficiency wages is weak—i.e. environment and context. Combining efficiency wages with Contingency Theory generates the conditional-wage hypothesis that predicts higher(lower) salaries for positions depending on the complexity(simplicity) and uncertainty(predictability) of the organizational environment.

Figure 6: Theoretical Model for the Conditional Wage Hypothesis



Theoretical Argument: Salaries are conditional on the matching requirements the employer faces from the environment and the stock of the position/skillset in the local labor force. Salaries are predicted by a function that accounts for environmental forces creating urgent organizational adaptation that may be driven higher depending on the rational calculations for employers.

Therefore, given *where* NGOs function and also *under* what institutions they operate the formal hypotheses tested here are:

> **H_1:** The conditional-wage hypothesis predicts no support for the labor donation theory in the complex and uncertain environment of Haiti.
> **H_2:** The conditional-wage hypothesis predicts certain organizations—international, humanitarian and development organizations—pay salary premiums in Haiti.
> **H_3:** The conditional-wage hypothesis predicts these international, humanitarian and development organizations pay salary premiums for only certain positions.

Data and Methods

Data Collection

This research uses original data collected with a two-stage survey design that was repeated in two observation periods (2011 and 2016). Bilingual surveys were developed in English, professionally translated into French, and then back-translated for accuracy. In the first wave, data collection used hardcopy surveys. In the second, the survey was administered online using the Qualtrics survey platform. Participation in the research was voluntary and the researcher promised confidentiality to all research participants. Data collection sought maximum participation from formal employers in Haiti in order to make the study as representative as possible. Contact information found online for public organizations (such as the Haitian government, local embassies, and U.N. agencies) and nonprofits (through aggregators GuideStar, Charity Navigator, and NGO Aid Map) yielded some responses but these data were often outdated. Snowball sampling became the principal technique of data collection.

The researcher approached private membership organizations of businesses and nonprofits[1]. Some associations provided contact information for their members, and those members were then contacted by the researcher without discrimination. Other associations were more guarded of their members' information and communicated private messages on behalf of the researcher. The researcher contacted all referrals made by participants, and the bilingual online survey used in the second data collection wave provided an anonymous link that participants could privately share with others. Unfortunately, because no reliable sample frame exists for all employers in Haiti, this research cannot make claims that the organizations in the sample are

[1] The American Chamber of Commerce in Haiti (Amcham Haiti); The Association des industries d'Haïti (ADIH); Chambre de Commerce et d'Industrie d'Haiti (CCIH); Comité de Coordination des ONGs (CCO); Le Cadre de Liaison Inter-ONG (CLIO); National Alliance for the Advancement of Haitian Professionals (NAAHP).

representative of employers in Haiti, nor can it generalize its results to other countries or time periods.

In the first stage, organizational leaders provided basic employer information such as size, nationality, legal form, and the scope of organizational activity. These employer characteristics are used as level-two factors in a hierarchical-level model. As organizational leaders completed this survey they provided name and contact information for persons within their organization to complete a second survey on salary, position responsibilities, and applicant qualifications. Only organizations who completed the short first-stage survey were contacted for additional data collection. The second-stage survey recorded the twelve-month salary range budgeted for a job vacancy, with bonus pay and other non-monetary compensation reported separately. This salary range includes a "low bid" for *acceptable*, minimally qualified applicants and a "high bid" for *exceptional*, highly qualified candidates. In total, the sample includes data from eight of Haiti's ten departments (administrative jurisdictions), with 75% of observations coming from Ouest and the capital city Port-au-Prince. The initial data collection resulted in 1,529 salary observations nested within 135 employer groups collected over two time periods (2011 and 2016).

Table 2 displays the frequency of observations organized by the primary sector in which the organization operates (rows, with subsectors grouped under sector) and organized into columns by the organization's legal form. *International Employee* is a binary response of the survey tool used by respondents to identify whether an applicant is expected to be "Haitian" or "Foreign/non-Haitian" to earn the salary reported. While uncommon in the labor donation literature, such a control captures the salary premium paid to legally import talented employees and its effect is strongest with employees recruited from developed Western countries (Hao, 2013). This response is used to restrict the data to observations for which the employee is expected to be Haitian. While

this omission of over 200 observations (almost 15% of the full sample) removes some power from the model, it also eliminates any possible effects expatriates' outlier-salaries have on estimated parameters. After list-wise deletion and restricting the sample, 1,309 observations (clustered within 122 employers collected over two observation periods) are analyzed. Data collection organized information on compensation benefits, organizational features, position characteristics, and employee qualifications.

Table 2: Frequency of Observations by Sector and Legal Form

Subsector	For-Profit	Nonprofit	Public/ Int. Org.	Religious/ Other	Total
Public Goods & Services					
Economic Development	0	12	8	0	20
Education	0	53	0	30	83
Government	0	0	36	0	36
Humanitarian Assistance	0	115	0	0	115
International Development	0	124	19	0	143
Private Goods					
Agriculture/Farming	17	46	0	0	63
Construction	105	10	0	0	115
Consumer Products Production	111	0	2	6	119
Retail Sales	88	0	0	0	88
Private Services					
Banking/Finance	77	0	0	0	77
Energy/Utilities	18	0	0	0	18
Medical	10	109	0	60	179
Orphanage	0	22	0	8	30
Restaurant/Hotel	111	0	0	0	111
Services	198	68	0	3	269
Telecommunication	40	0	0	0	40
Other	23	0	0	0	23
Total	798	559	65	107	1,529

Source: Primary data collected from formal employers in Haiti during two observations periods (2011, 2016). NOTE: table summarizes full dataset (N=1,529; 135 employers) but a restricted subset of data is used in the final analysis (n=1,309; 122 employers).

Unit of Analysis

Contained in the position questionnaire is the unit of analysis: *Estimated Salary Offer* (henceforth *Salary* for short) defined as the estimated annual salary a hiring manager budgets for a position filled by an employee with a given skill set. To capture intra-organizational and intra-position variation, the survey identifies the characteristics the hiring manager believes the *acceptable* applicant possesses to deserve a lower estimated salary offer as well as those the *exceptional* candidate possesses to earn a higher estimated salary offer. This salary range, or *barème de salary*, is a familiar administrative device used by HR managers in Haiti[2].

[2] To demonstrate, for any position *X*, a hiring manager reports the expected salaries for the acceptable-*X* and exceptional-*X*. The acceptable applicant for *X* may only have two to four years of work experience whereas the exceptional candidate for *X* may have more than ten years of work experience, yet both have a high school education and are otherwise equally qualified across all other individual-level factors. Therefore, based on the expert response from the employers hiring manager, the intra-employer variation in salary for *X* is associated to differences in work experience.

The data contain three types of variables. Level-1 variables are those measured at the level of the dependent variable, salary. Descriptive statistics for these individual-level, or salary- or position-level, variables are shown in **Table 3**. Data presented in that table for dependent and independent variables represent calculations made on the 1,309 observations analyzed. Descriptive statistics for employer-level variables are found in **Table 4**. Of the 122 employers represented in the data, each completed as few as 2 (single observation period) to as many as 52 (over both observation periods) surveys. To equally weight organizations, the descriptive statistics disaggregate these responses to accurately describe the variety of organizations represented in the study. The descriptive statistics for organizational-level variables represent calculations made on 122 equally-weighted employers who participated in the study (as opposed to the 1,309 observations analyzed).

Model Variables

The dependent variable is twelve-month *Salary* measured in thousands of US dollars. The value is the amount budgeted for hires with particular qualifications as reported by the expert respondents (hiring managers employed at organizations). Hiring managers reported twelve-month salaries, which when necessary were converted from Haitian gourdes using a 40:1 currency conversion in 2011, and 65:1 conversion in 2016. These rates were generally acceptable at the time the data was collected[3]. Assuming salary parity across time, the average salary is $13,175 with a standard deviation of $17,140. The dependent variable ranges from $450 to $195,000 for the observations analyzed. Salary is regressed against covariates that represent variables of the general human capital approach (Becker, 1962), which are employee owed skills that help productivity

[3] The study assumes salary parity across time. The researcher recognizes the importance in controlling for time variant factors (e.g. fluctuating exchange rates, foreign aid flows, etc.) and inter-employer differences (e.g. the currency denomination of an employer's income and expenses, the negotiated employer-employee agreement that stipulates at what exchange rate and in what currency a salary is to be paid), but such data was not provided by respondents.

and are transferable across firms and explain the demand and competition for workers' services. Data and analysis include variables typically employed in earnings regressions in both the labor donation literature and labor economics literature and attempts to disentangle the explanation of wage differentials, which Preston (1988, 1989) suggests can be due to differences across organizations or differences in employee quality.

Two categorizations for position are used. The first, *Position*, organizes observations in 1 of 14 different position groups listed alphabetically in Table 3. Positions that were either underrepresented in the data or highly insignificant were added to the *Other*[4] category to serve as a large referent category (28% of observations). The next most represented categories are *Managers* (19%), *Drivers* and *Office Staff* (9%), and *Secretaries* (7%). The smallest category, *Economist/Financial Professional,* has 10 unique observations. The second position categorization uses the familiar *Mintzberg Design* (Mintzberg, 1979, 1980, 1983) to reduce the dimensionality of position types to five (as defined by Mintzberg's typology). Mintzberg's design parameters provide categories into which various positions cluster according to their role and function within an organization. This is a useful conceptualization for positions because it allows for greater extension of positions across sectors of employers. For example, agency directors (governments), country directors (NGOs), and owners (businesses) are, for all intents and purposes unique to their sectors, but are similar in that they are all senior managers within their organizations and all belong to the same Mintzberg type: *Strategic Apex*[5]. This approach is a departure from the earliest labor

[4] This position category includes position types identified by research participants in their original responses as agriculturalists, cashier, chemist, cook, data entry clerk, doctor, enumerator/surveyor, handyman, IT professional , lab technician, lawyer/legal counsel, M&E professional, marketing professional, mechanic, operations professional, pharmacist, pilot, salesperson, statistician, teacher, ticket agent, translator, and wait staff.

[5] Complicating matters slightly is the reality that a given position can belong to different design parameters depending on the sector in which an organization operates. On the one hand, a doctor working for an organization that works in the medical sector belongs to the *operating core* because the individual generally performs work essential to the mission of the organization. On the other hand, a doctor working for an international development organization is a member of the *technostructure* because the individual generally has advisory responsibilities that includes designing,

donation research that categorized positions into simpler groupings such as "managers and professionals" and "clerical and sales" (Preston, 1989), and later worked that used "blue-collar", "employee", "technicians or supervisors", and "managers" categories (Narcy, 2011). In total, more than 45 position types were available to respondents during data collection but have subsequently been consolidated into 14 *Position* categories and 5 *Mintzberg Designs* for analysis.

Prior labor donation research relied largely on secondary data typically provided by government sources (e.g., Lee, 2015; Leete, 2000; Narcy, 2011; Preston, 1989). Notable exceptions are Becchetti, et al. (2013) who used data from six universities that used questionnaires to collect data from active Italian cooperatives, and the work of Bassous (2015) who sampled employees in three faith-based NGOs. This use of secondary data trades immediate access to large-N samples for the ability to control for nuances in workers' skill sets. The original data used in this study includes important observation-level nuances such as worker autonomy, professional experience, computer literacy and training, education, and language ability.

The data contain position-level category variables for worker autonomy and computers skills. *Worker Autonomy* is a category variable that measures the amount of time and energy an organization expects to spend supervising a new hire. Its four values include "constant supervision" (22%), "daily to weekly supervision" (29%), "weekly to biweekly supervision" (22%), and a fourth value that combines "monthly supervision" and "supervision less frequently than monthly" categories (27%). *Computer Literacy & Training* is a category variable that measures the expected amount of computer literacy and on-the-job (OTJ) computer training

planning, improving, and training the work performed by the operating core. In these two examples, the same position—*doctor*—performs different functions within the organization because the nature of the work is dependent on sector in which the organization operates. Interpretation of the *Mintzberg* categories should done with caution because categorization of those observations were done by the researcher during analysis. In the future, to ensure internal validity, expert respondents completing the second survey should be given definitions and examples of the Mintzberg typology and asked to associate the position for which they were completing the survey to the appropriate Mintzberg type.

required. Its possible values include "computer skills are unrequired" (35%), "no skills possessed and given full training" (4%), "some skills possessed and given some training" (22%), and "full skills possessed with no training provided" (40%). To date, labor donation research has not controlled for computer skills in empirical models. However, labor economics literature underscores the importance of computer skills in the workplace (Autor, 2001; Becker, 1993; Dedrick, Gurbaxani, & Kraemer, 2003; Goldsmith, Veum, & Darity, 1997).

The economics literature suggests the accumulation of education, basic skills, and work experience determine wage (Goldsmith, et al., 1997). Hayes and Schaefer (1999) show that higher compensation is awarded to hires because of "high ability" relative to their peer group, and Lazear (2009) finds firms reward hires who possess transferable skills and training that help productivity. This study uses three categories of individual-level variables to account for differences in experience and skills.

In general, tenure (Narcy, 2011; Preston, 1989) and experience (Leete, 2000) have been common controls in the labor donation research and these variables are familiar to the broader work of labor economics (Goldsmith, et al., 1997; Hayes & Schaefer, 1999; Kiker, Santos, & deOliveira, 1997; Lassibille, 2001; Maume, 1999; Pfeffer & Langton, 1993). *Professional Experience* is a category variable that uses four responses to account for prior professional experience employees are expected to possess. The values for "professional experience is unrequired" are combined with "possesses some professional experience but that experience is less than two years" for the first category (35%), "possesses two to four years of professional experience" (32%), "possesses five to ten years of professional experience" (25%), and "possesses more than ten years of professional experience" (7%).

In general, labor donation research shows returns to education to be positive (Leete, 2000; Narcy, 2011; Preston, 1989) and in broader labor economics research education is a common control variable (Goldsmith, et al., 1997; Hao, 2013; Kiker, et al., 1997; Maume, 1999; Pfeffer & Langton, 1993). *Education* is a category variable that measures new hires by the highest educational level they are expected to have achieved. Its values combine "less than high school" and "high school" (50%), "university" (42%), and "greater than university, or graduate" (7%). Leete (2000) and Dustmann (1994) control for the effect of language of English and German, respectively, on earnings potential. Leete's research used English fluency as a control variable in a model of nonprofit and for-profit wage differentials, and Dustmann's work used it as a factor to explain variability of earnings among of migrant workers in Germany. *Reads English* is a binary variable used to identify new hires by their ability to read English (55%). The variable takes the value of "1" for applicants expected to possess the skill.

Table 3: Descriptive Statistics of Salary-Level Variables (n=1,309)

	Mean	SD	Min.	Max.
Dependent Variable: Salary [a]	13,175	17,140	450	195,000
Dependent Variable: ln(Salary)	8.915	1.142	6.11	12.18
Position				
Cleaning Staff	0.05		0	1
Driver	0.09		0	1
Economist/Financial Professional	0.01		0	1
Engineer	0.02		0	1
Executive	0.05		0	1
HR Professional	0.03		0	1
Manager	0.19		0	1
Messenger	0.03		0	1
Nurse	0.02		0	1
Office Staff	0.09		0	1
Other [+]	0.28		0	1
Physical Laborer	0.04		0	1
Secretary	0.07		0	1
Security Guard	0.04		0	1
Mintzberg Design				
Strategic Apex	0.05		0	1
Midline Manager	0.19		0	1
Operating Core	0.16		0	1
Technostructure	0.19		0	1
Support Staff [+]	0.41		0	1
Worker Autonomy				
Requires Constant Supervision [+]	0.22		0	1
Requires Daily/Weekly Supervision	0.29		0	1
Requires Weekly/Bi-weekly Supervision	0.22		0	1
Requires Little Supervision (Monthly or Longer)	0.27		0	1
Computer Literacy & Training				
None Required for Position [+]	0.35		0	1
Possess None & Given Full On-the-Job (OTJ) Training	0.04		0	1
Possess Some & Given Partial OTJ Training	0.22		0	1
Must Possess Skills (Given No OTJ Training)	0.40		0	1
Professional Experience				
Zero to Less-than 2yrs Required [+]	0.35		0	1
Two to Less-than 5yrs Required	0.32		0	1
Five to 10yrs Required	0.25		0	1
More than 10yrs Required	0.07		0	1
Education				
Less than University [+]	0.50		0	1
University	0.42		0	1
More than University	0.09		0	1
Reads English	0.55		0	1
Data Collection Wave 2 (2016)	0.36		0	1

Source: Primary data collected from formal employers in Haiti during two observations periods (2011, 2016).

[+] Used as referent category during analysis

[a] Analyzed as '000s USD. Hiring managers reported twelve-month salaries, which were converted from Haitian gourdes using a 40:1 currency conversation in 2011 and 65:1 in 2016, which were generally acceptable at the time the data was collected.

Finally, seven covariates or groups of covariates control for organizational differences. These level-2, organizational variables are described in **Table 4**. *Legal Form* is a category variable used to characterize organizations as for-profit businesses (54% of employers), nonprofits (35%), public governments or international organizations (4%), and or other organizational variants to accommodate respondents (7%). *Sector* reorganizes the 16 subsectors available to respondents on the surveys into three broader categories for analysis (see Table 2). Of all employers who provided data, 23% belong to the public goods and services sector, and 36% and 50% belong to the private goods and private services sectors, respectively. These percentages exceed 100% because 11 organizations changed their primary sector of activity across data collection periods. More than two-thirds of the employers are *Located in Ouest* department (83 of 122 organizations), which contains the Port-au-Prince metropole. Less than half (40%) of employers describe themselves as *non-Haitian/International*. Of the 122 employers who participated in the study, 65 provided data in only the first data collection period (2011), 45 provided data in only the second period (2016), and 12 provided data in both waves. At the time of data collection, the average organization employed slightly more than 250 *Full-Time Employees* (standard deviation 950 employees) and enjoyed slightly more than 22 *Years of Experience Operating in Haiti* (standard deviation of 23 years). Finally, 18 of the 122 organizations (15%) meet the criteria for the organizational hybrid *International, Humanitarian & Development Organization* (IHDO), which is defined here as an international entity with primary operations in either the humanitarian assistance, international development, or economic development sector. IHDOs need not be of a particular legal form or particular foreign nation(s).

Table 4: Descriptive Statistics of Employers (groups=122)

	Employers	Mean	SD	Min.	Max.
Intl. Humanitarian & Development Org.	18	0.15		0	1
Legal Form [a]					
For-profit Business [+]	66	0.54		0	1
Nonprofit	43	0.35		0	1
Public/International Organization	5	0.04		0	1
Religious/Other	9	0.07		0	1
Sector [b]					
Public Goods & Services [+]	28	0.23		0	1
Private Goods	44	0.36		0	1
Private Services	61	0.50		0	1
Located in Ouest/Port-au-Prince	83	0.68		0	1
International Organization	49	0.40		0	1
Full-Time Employees [c]	122	257.8	949.97	2	10,000
Years Operating in Haiti	122	22.28	22.56	2	161
Observation Period [d]					
Wave 1 (2011) [+]	77	0.63		0	1
Wave 2 (2016)	57	0.47		0	1

Source: Primary data collected from formal employers in Haiti during two observations periods (2011, 2016).
[+] Used as referent category during analysis
[a] One organization switched from being a business in 2011 to being a nonprofit in 2016.
[b] Eleven organizations switched primary activity between 2011 and 2016 observation periods. See Table 2 for subsectors that comprise sectors.
[c] Standardized for analysis (M=0, SD=1)
[d] Twelve organizations provided data in both observation periods

Representativeness & Generalizability

Descriptive statistics for individual-level and organizational-level variables are shown in Table 3 and Table 4, respectively. For several reasons, it is difficult to determine the extent to which this dataset is representative of Haiti's entire labor market. First, precise data on the Haitian labor market are simply unavailable because a sister organization to the U.S. Bureau of Labor Statistics (BLS), where employment statistics are generated by a trained staff with access to a budget of over $600 million (BLS, 2016), is nonexistent within the Government of Haiti. Second, if such an agency did exist its information output may be considered unreliable because Haiti has low state capacity that, in the years in which the data was collected, ranked it in the bottom quintile in 2011 and 2015 in four measures of governance effectiveness according to the World Bank's

World Governance Indicators[6]. Further, Haiti's Statistical Capacity Indicator as calculated by the World Bank[7] is 42.2 in 2011 and 38.9 in 2016, as compared to the Latin American & Caribbean region, which is 77.1 and 78.2 in the same time periods, respectively. Third, and perhaps most importantly, Haiti has a large and diverse informal economy that takes shape as informal businesses, self-employed barbers and couriers, and individual food sellers and day laborers. Conservative estimates suggest this informal economy accounts for 65% to 80% of total employment in Haiti (Chambwera, MacGregor, & Baker, 2011, p. 4; The World Bank, 2012), to as much as 95%, as reported by Mr. Fatal Jean Bonald, Secretary General of the Confederation of Workers in the Public and Private Sectors in Haiti (Vanasse, 2014). These barriers to credible and accessible information are the reasons why this research chose to focus on primary data collection, and are the same reasons why claims of representativeness are not made nor strong claims of generalizability attempted.

Methods

The goal of this research is to identify whether an NGO wage premium exists in Haiti and whether it remains five-years after the zenith of foreign assistance funding. To accomplish this, the research uses hierarchical-level modeling (HLM) to partition the variance at employee- and employer-levels while controlling for characteristics of organizations, positions, and employees to explain the variability in salary. The unit of analysis is expected annual salary as reported by hiring managers of formal employers in Haiti. Explanatory variables include covariates for organizational

[6] Regulatory Quality, Control of Corruption,, Rule of Law, and Government Effectiveness.

7 The Statistical Capacity Indicators (SCIs) are produced annually by the World Bank and provide information on various aspects of national statistical systems of developing countries, including an overall country-level statistical capacity indicator. The indicators provide an overview of the capacity of a country's national statistical system based on a diagnostic framework thereby assessing three dimensions: Methodology, Source Data, and Periodicity and Timeliness.

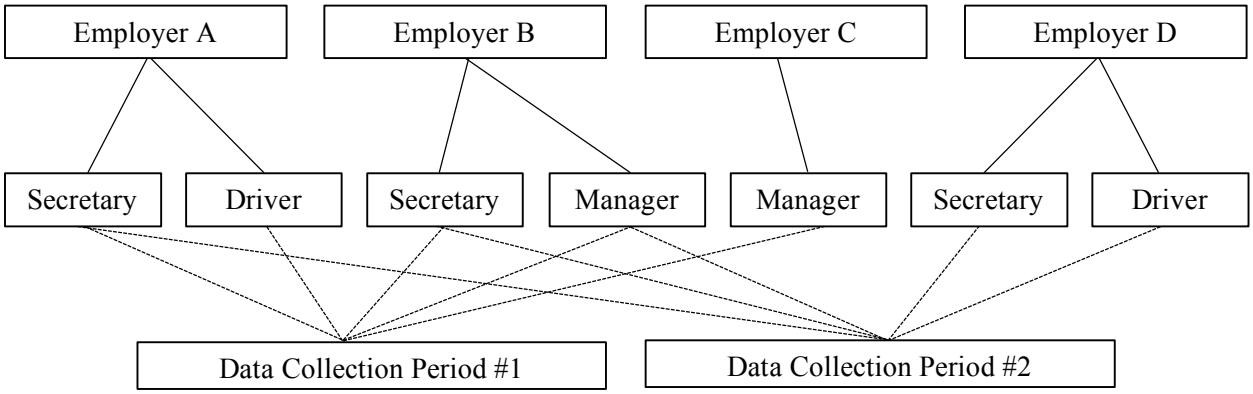
legal form, organizational nationality, organizational sector, and position. Additional control variables are included in the analysis to account for organization- and position-level factors.

A primary assumption of analysis of variance (ANOVA) models is the independence of observations. With respect to this research, an ANOVA model assumes each salary is independent of each other. However, if the data's dependent observations cluster—e.g. salaries within an employer are more similar to each other than salaries from another employer—then the assumption of independent observations is violated, and ignoring this violation shrinks estimates of the standard errors of conventional statistical tests and can cause severely inflated Type I Error rates (Barcikowski, 1981; Hox, 2010; Kreft & Leeuw, 1998). HLM is one way to manage this interdependency and model dependent observations (Gelman & Hill, 2007; Snijders & Bosker, 1999). Using HLM's empty models (a model with no predictors) we calculate the data's intra-class coefficient (ICC), which quantifies the degree of clustering/interdependence within the data structure. As shown in **Table 5**, the partitioning of variance by organization (Empty Model 1) shows information that calculates an ICC of 0.273. The ICC can be interpreted as the correlation among salaries within the same employer—i.e., the correlation between any two randomly selected salaries from within the same employer is 0.273. In other words, that data show 27% of the variance in salary is accounted for at the employer level. This value indicates salaries are nested within employers in the dataset and a consequential amount of variance in salary is happening at the employer level, which is evidence of a clear violation of the independent observations assumption.

As described above, data collection for this study occurred in 2011 in 2016, with 12 of 122 employers providing data in both observation periods. Empty Model 2 (in Table 5) clusters observation by observation period and shows approximately zero variance in salary is happening

at the time level. Yet, because of these repeated observations, some employers reported position-salaries in both 2011 and 2016. This means observations are cross-classified because each individual outcome (salary) uniquely belongs to one combination of two different level-2 units (employer and time). **Figure 7** shows an example of the data structure for ten observations from four employers (top row of boxes) over two data collection periods (bottom row of boxes). The middle row of seven boxes represent different position-level responses. The solid lines show how position-level responses are grouped by employer. The dotted lines show that Employers A & B participated in both rounds of data collection, while Employer C participated in only the first period, and Employer D participated in only the second. The two responses from the Employer A Secretary, and two responses from each Employer B Secretary and Employer B Manager show the cross-classification of data—i.e., each belongs to a unique combination of employer and data collection period. The cross-classified random effect model (CCREM) statistical model accounts for these crossed-classified effects to minimize Type I Errors.

Figure 7



This study leverages repeated observations from employers and properly controls for this cross-classification by nesting observations by employer with a crossed random effect for observation year (Table 5, Model 3). Although the variance of observation year is mostly washed

out by the employer clustering, it is still appropriate to use the crossed effect given the structure of the data. The values in Table 5 show the proportion of variance explained at the position-level decreased from 73% in Empty Model 1, to less than 72% in Empty Model 3.

Table 5: Partitioning Variance in Cross-Classified Random Effect Models (CCREM)

	Empty Model 1 (idORG)		Empty Model 2 (idYR)		Empty Model 3 (CCREM)	
Fixed Effect	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
$\gamma 0$ Intercept	11.82	(0.906)	13.76	(0.474)	11.96	(1.181)
Random Effects	Var. Comp.	S.E.	Var. Comp.	S.E.	Var. Comp.	S.E.
Crossed random effect:						
τ_w^2=var(W_f) observation year					1.10	(2.084)
Level-two random effect:						
τ_0^2=var(U_{0j}) nesting variable [a]	73.84	(11.893)	0.00	(0.000)	75.23	(12.218)
Level-one variance:						
σ^2 = var(R_{ij})	196.20	(7.995)	293.57	(11.475)	195.59	(7.992)
Observations	1,309		1,309		1,309	
Groups	122		2		122	

Source: Primary data collected from formal employers in Haiti during two observations periods (2011, 2016).
Standard errors in parentheses
Empty models ran on restricted subset of data (n=1,309; groups=122) and not full dataset (N=1,529; groups=135).
[a] Level-2 nesting variable for Empty Model 1 is organization (idORG), for Empty Model 2 it is observation period (idYR), for Empty Model 3 it is organization with a crossed random effect for observation period.
Cross-Classified (or Crossed-Effects) Random Effect Model (CCREM) ran using `mixed` command in Stata v14.1

Results

Analysis involved two phases of model building to isolate the variables necessary to address the research question. The first phase, **Table 6**, used CCREM to regress position salary on organizational-level factors while controlling for only one position-level variable, position. Model 1 shows various legal form categories are not individually significant from the referent group (business). When testing whether the different legal forms simultaneously have no association with salaries, we cannot reject the hypothesis that the effects for the linear measures of legal form are simultaneously zero at the 0.05 level ($X^2(3)=4.07$). This provides initial support of the first hypothesis of the conditional-wage hypothesis: that labor donation theory is not transferable to the

complex and uncertain environment of Haiti. Other organizational characteristic such as sector, size, age, and nationality are statistically insignificant. Other factors such as geographic location ($p<0.01$), observation period ($p<0.05$), and 10 of the 16 positions are significant at the 0.05 level in this preliminary model[8]. Model 2 offers yet another test for the generalizability of labor donation theory with the inclusion of a series of interactions. Interacting each organization's legal form with its organizational nationality tests whether Haitian businesses (the referent category) are statistically different than international nonprofits and other legal-national organizational permutations. When specifically comparing Haitian businesses and nonprofits, Model 2 shows those two types of organizations are not statistically different from each other ($z=-0.76$, $p>0.40$). The lack of statistical significance in this interaction and its main effects, combined with the inability to reject that hypothesis that the four interaction terms are simultaneously equal to zero ($LRX^2(4)=3.76$), offer additional support for the prediction that labor donation theory is inapplicable to the complex and uncertain environments of Haiti.

[8] All tests in this paper are two-tailed tests unless otherwise noted.

Table 6: Cross-Classified Random Effects Model (human capital controls missing)

	(1) Traditional Sectors	(2) International x Sectors	(3) IHDO Dummy Model	(4) Organizational Model
IHDO [a]			7.50*	8.92**
Legal Form [a]				
Nonprofit	-2.33	-2.51	-1.87	
Public/International Org.	-5.26	-14.32*	-3.35	
Religious/Other	-6.11+	-3.23	-4.31	
Sector [a]				
Private Goods	-3.04	-2.81	2.19	4.20
Private Services	-0.78	-0.64	4.38	5.80+
Located Ouest/PAP	4.78**	4.75**	4.87**	5.57***
Full-Time Employees [b]	0.36	0.69	0.30	
Years Operating in Haiti	0.01	-0.01	0.01	
International Organization	2.61	2.08	1.47	
Position [a]				
Executive	25.39***	25.41***	25.40***	24.86***
Manager	10.95***	10.99***	10.93***	10.37***
Accountant	1.71	1.70	1.70	
Economist/Financial Pro.	18.03***	18.38***	17.93***	17.39***
Engineer	6.32*	6.34*	6.17*	5.46+
HR Professional	14.45***	14.41***	14.48***	13.99***
Operations Professional	2.16	2.26	2.04	
Office Staff	-2.52+	-2.53+	-2.56+	-3.11*
Secretary	-2.72+	-2.71+	-2.71+	-3.20*
Cleaning Staff	-8.68***	-8.68***	-8.67***	-9.09***
Driver	-6.73***	-6.71***	-6.72***	-7.27***
Mechanic	-1.49	-1.53	-1.42	
Messenger	-7.47***	-7.38***	-7.54***	-8.09***
Nurse	-3.70	-3.69	-3.72	-4.31+
Physical Laborer	-5.39*	-5.36*	-5.63**	-6.42**
Security Guard	-6.83***	-6.79***	-6.82***	-7.41***
Interactions [a]				
International x Nonprofit		0.93		
International x Pub./Int. Org.		14.66		
International x Rel./Other		-4.53		
Observation Period 2016 [a]	2.83*	2.73*	2.92*	2.72*
Constant	7.44*	7.71*	2.14	0.55
Random Effects	Var.Comp.(SE)	Var.Comp.(SE)	Var.Comp.(SE)	Var.Comp.(SE)
Crossed random effect:				
τ_w^2=var(W_f) obs. year	0.00 (0.000)	0.00 (0.000)	0.00 (0.000)	0.00 (0.000)
Level-two random effect:				
τ_0^2=var(U_{0j}) employer	47.19 (8.037)	44.68 (7.783)	45.29 (7.774)	46.35 (7.857)
Level-one variance:				
σ^2 = var(R_{ij})	129.69 (5.305)	129.81 (5.360)	129.62 (6.071)	129.92 (5.550)
BIC	10,483.97	10,508.92	10,493.99	10,434.26

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001; for all models 1,311 observations and 123 groups

[a] Referent categories are IHDO (org. is not international humanitarian development org.); Legal Form (business); Sector (public goods and services); Position (other); Interactions (Haitian x business); Observation Period (2011)

[b] Standardized (M=0, SD=1) to measure organizational size (operating budget not available for all organizations)

These Model 2 interactions raise two interesting insights that deserve further investigation. First, it appears that, on average, Haitian public administration is associated with a significant discount relative to the Haitian business referent category ($z=-1.96$, $p<0.05$) and this public organizational type is significantly different from zero ($X^2(1)=3.85$, $p<0.05$). Second, this model presents evidence that challenges common wisdom that international NGOs (INGOs) pay a significant premium relative to other organizational types. This organizational combination is not significantly different from the Haitian business referent group ($z=0.19$, $p>0.80$) and is not significantly different than zero ($X^2(1)=0.04$, $p>0.80$). One possible explanation for this is that INGOs are not a monolithic group. As shown in **Table 7**, these organizations operate across a wider variety of subsectors than other international organizational types. Slightly more than half of all observations from INGOs (247 of 479) come from the economic development, humanitarian assistance, and international development subsectors. And across all legal forms, those three subsectors comprise 40% and 20% of all observations from international organizations and all organizations, respectively[9].

[9] Restricting the sample to salary observations expected by HR manager respondents to be filled by Haitians slightly changes these ratios. Doing so shrinks the total number of observations from INGOs from 479 to 434 and the international employers from 693 to 624. Still, for observations expected to be filled by Haitian employees, 50% (220/434) and 38% (236/624) of observations for from international organization and all organizations, respectively.

Table 7: Frequency of Observations by Subsector and International Organization Type

Subsector	For-Profit	Nonprofit	Public/ Int.Org.	Religious/ Other	Total
Agriculture/Farming	0	42	0	0	42
Construction	40	10	0	0	50
Consumer Products Production	24	0	0	0	24
Economic Development	*0*	*12*	*8*	*0*	*20*
Government	0	29	0	22	51
Humanitarian Assistance	*0*	*111*	*0*	*0*	*111*
International Development	*0*	*124*	*19*	*0*	*143*
Medical	0	99	0	24	123
Orphanage	0	22	0	8	30
Services	58	30	0	3	91
Total	122	479	35	57	693

Source: Primary data collected from formal employers in Haiti during two observations periods (2011, 2016).
Note: frequencies displayed are a subset of the full dataset (N=1,529), which is restricted by nationality of employer. Observations in *italics* comprise international humanitarian and development organizations (IHDOs).

Model 3 replaces the failed interactions of Model 2 with a binomial category variable for the international humanitarian and development organization (IHDO) organizational-hybrid while holding the rest of the model constant. Inclusion of the IHDO covariate is statistically significant ($z=2.10$, $p<0.05$) while most other variables in the model remain unchanged. Post estimation analysis identifies several variables as candidates for elimination from the model due to their statistical insignificance. First, we cannot reject the hypothesis that the effects for the linear measures of legal form are simultaneously zero ($X^2(3)=1.86$, $p>0.60$). Next, when examining organizational size, age, and nationality as a group, we cannot reject the assertion that their effects are simultaneously zero ($X^2(3)=0.88$, $p>0.80$). Third, when examining the accountant, mechanic, and operations professional position types together, we cannot reject the hypothesis that their effects are simultaneously zero ($X^2(3)=2.76$, $p>0.40$). Removing these covariates from the model (Model 4) does not eliminate their effects completely. Instead, organizational variables legal form, size, age, and nationality are absorbed into the random effects portion of the model, which models each organization as having a unique intercept value with all organizational intercepts normally

distributed with a mean of zero. The three position types are eliminated as categories but their observations are added to the *other* position type (the referent category).

Using a likelihood-ratio test to compare Model 4 and Model 3, we cannot reject the hypothesis that these removed covariates simultaneously have no association with salary ($LRX^2(9)=4.87$, $p>0.80$). The Bayesian Information Criterion (BIC) is additional evidence that supports Model 4 is a better fit of the data. The BIC is a complexity-adjusted metric that compares specifications that use the same sample to regress the same dependent variable on different combinations of covariates (Raftery, 1995). Decreasing BIC values indicate an increasing ability for the model(s) to fit the variation in the outcome, and a decrease in BIC by 10 points or more indicates very strong evidence to support one model over another (Raftery, 1995). Of the four models presented in Table 6, the final model has the lowest BIC value (10,434), which is 50 points below the next lowest BIC value (Model 1). This indicates Model 4 (the organizational model) provides a better fitting model compared to all others tested. Finally, in this organizational model, the binomial category variable for IHDOs is statistically significant ($z=2.70$, $p<0.01$) and provides initial evidence in support of the second conditional-wage hypothesis that predicts these international, humanitarian and development organizations pay salary premiums in Haiti. One explanation for why IHDOs pay an almost $8,000 premium might be that they desire different (presumably stronger) qualifications in their applicants. This model does not account for human capital factors possessed by employees and transferable across employers, but **Table 8** adds such individual-level controls.

The first model in Table 8 is the same as the last model in Table 7 and looks altered because several of the rows were removed to save space (see Appendix for redacted information). Model 5 adds human capital controls to Model 4 to create the human capital model. Inclusion of these

covariates decreases the BIC value by 469 points, which is very strong evidence that the inclusion of these individual-level factors greatly improves the model's ability to fit the data. Comparing the post-estimation results of Model 5 to Model 4 leads us to reject the hypothesis that the additional human capital variables are simultaneously equal to zero ($LRX^2(12)=555.24$, $p<0.001$). As for each group of position-level category variables, all have a significant association with salary: position ($X^2(13)=197.19$, $p<0.001$), worker autonomy ($X^2(3)=40.28$, $p<0.001$), professional experience ($X^2(3)=157.04$, $p<0.001$), computer knowledge and training ($X^2(3)=19.48$, $p<0.001$), and education ($X^2(2)=68.62$, $p<0.001$). As a baseline, the average salary in 2011 for a person employed by a non-IHDO located outside of Ouest that primarily operates in the public goods and services sector, who is employed as an 'other' position type, and who requires constant supervision, possesses less-than two years of professional work experience, employed in a position that does not use a computer, and possesses a high-school education or less and cannot read English is -$4,640 (-4.64, $p<0.10$). This baseline average salary ranges ±$15,316 for a typical low-paying (bottom 2.5%) and high-paying (top 2.5%) employer. Of course, this negative salary is nonsensical, but it is important to understand that it is only a baseline to which other coefficient values are added.

The human capital model shows strong, positive, and significant relationships between wages and individual human capital traits. Positions whose applicants are expected to possess the ability to read English are, on average and holding all else constant, associated with salaries that are $3,445 higher than those where English literacy is unrequired (3.445, $p<0.001$). If an individual develops the capacity to work autonomously, that is requiring supervision every week or every other week, then her salary is $2,000 higher (2.076, $p<0.05$), on average, than employees who requires constant supervision. Professional experience also has positive gains with employees with

5-10yrs of experience and greater-than 10yrs of experience earning over $3,000 (3.229, $p<0.001$) and $16,500 (16.513, $p<0.001$) more than individuals with less-than two years of experience, respectively. Computer expertise begins to yield returns when employers no longer expect to provide on-the-job training ($p<0.01$). Finally, *ceteris paribus*, relative to individuals who obtain only a high school education or less, university graduates earn more than an additional $2,000 (2.386, $p<0.01$) and those who receive advanced formation earn almost an additional $11,000 (10.817, $p<0.001$).

Next, to create a more interpretable estimate, we use the most prevalent responses from Table 3 and Table 4 to estimate a more practical salary. From Table 3, the most prevalent individual-level responses are managers (position), daily/weekly supervision (worker autonomy), possess all necessary computer skills (computer literacy), has 2-5yrs of experience (professional experience), and possesses both a university degree (education) and the ability to read English. From Table 4, the most prevalent employer-level characteristics are non-IHDO, engaged in the private services sector (sector), located in Ouest (Ouest/PAP), with data collected in 2011 (observation period). Adding together the coefficient for each of these characteristics (22.66) to the constant (-4.636) generates an estimated salary of $18,024, which varies ±$15,316 for a typical low-paying (bottom 2.5%) and high-paying (top 2.5%) employer. To come full circle, we compare this estimate to the average for all managers at non-IHDO employers (191 of 1,309): average $23,863 (min $750, max $93,450). In this human capital model, the organizational-level variable for IHDO is only marginally significant ($z=1.77$, $p<0.08$) and offers marginal support for the second conditional-wage hypothesis that predicts international, humanitarian and development organizations pay salary premiums in Haiti.

Table 8: Cross-Classified Random Effects Model with Human Capital Controls

	(4) Organizational Model	(5) Human Capital Model	(6) Mintz. Interactions	(7) Interactions w/o H.C.
IHDO [a]	8.92**	5.01+	5.89*	6.87+
Located Ouest/PAP	5.59***	3.53*	3.94**	5.92***
Position [a]				
Executive	24.86***	15.13***		
Manager	10.37***	4.77***		
Economist/Finance Pro.	17.38***	8.88**		
Engineer	5.46+	0.04		
HR Professional	13.99***	8.75***		
Office Staff	-3.08*	-2.57*		
Secretary	-3.20*	-2.90*		
Cleaning Staff	-9.09***	-1.76		
Driver	-7.27***	-0.47		
Messenger	-8.09***	-0.65		
Nurse	-4.31+	-0.88		
Physical Laborer	-6.42**	0.70		
Security Guard	-7.41***	-0.49		
Mintzberg Design [a]				
Technostructure			3.54***	9.10***
Operating Core			2.89**	4.35***
Midline Manager			7.08***	14.76***
Strategic Apex			16.43***	29.04***
Interactions [a]				
IHDO x Technostruct.			-1.43	1.71
IHDO x Operating Core			-4.67	-8.67
IHDO x Mid. Manager			-2.29	5.79*
IHDO x Strategic Apex			4.37	9.68*
Obs. Period 2016 [a]	YES	YES	YES	YES
Sector Categries [a]	YES	YES	YES	YES
Supervision [a]		YES	YES	
Professional Experience [a]		YES	YES	
Computer Lit./Train. [a]		YES	YES	
Education [a]		YES	YES	
Reads English		YES	YES	
Constant	0.51	-4.64+	-6.74*	-5.35
Random Effects	Var.Comp.(SE)	Var.Comp.(SE)	Var.Comp.(SE)	Var.Comp.(SE)
τ_w^2=var(W_f) obs. year	0.00 (0.000)	0.00 (0.000)	0.00 (0.000)	0.00 (0.000)
τ_0^2=var(U_{0j}) employer	46.61 (7.903)	34.68 (7.659)	36.54 (5.988)	50.23 (8.483)
σ^2 = var(R_{ij})	130.07 (5.379)	84.30 (5.984)	85.88 (3.518)	135.07 (5.526)
BIC	10,420.20	9,951.09	9,942.64	10,429.83
Observations	1,309	1,309	1,309	1,309
Groups	122	122	122	122

Full Model Not Shown (Redacted Information in Appendix) + p<0.10, * p<0.05, ** p<0.01, *** p<0.001

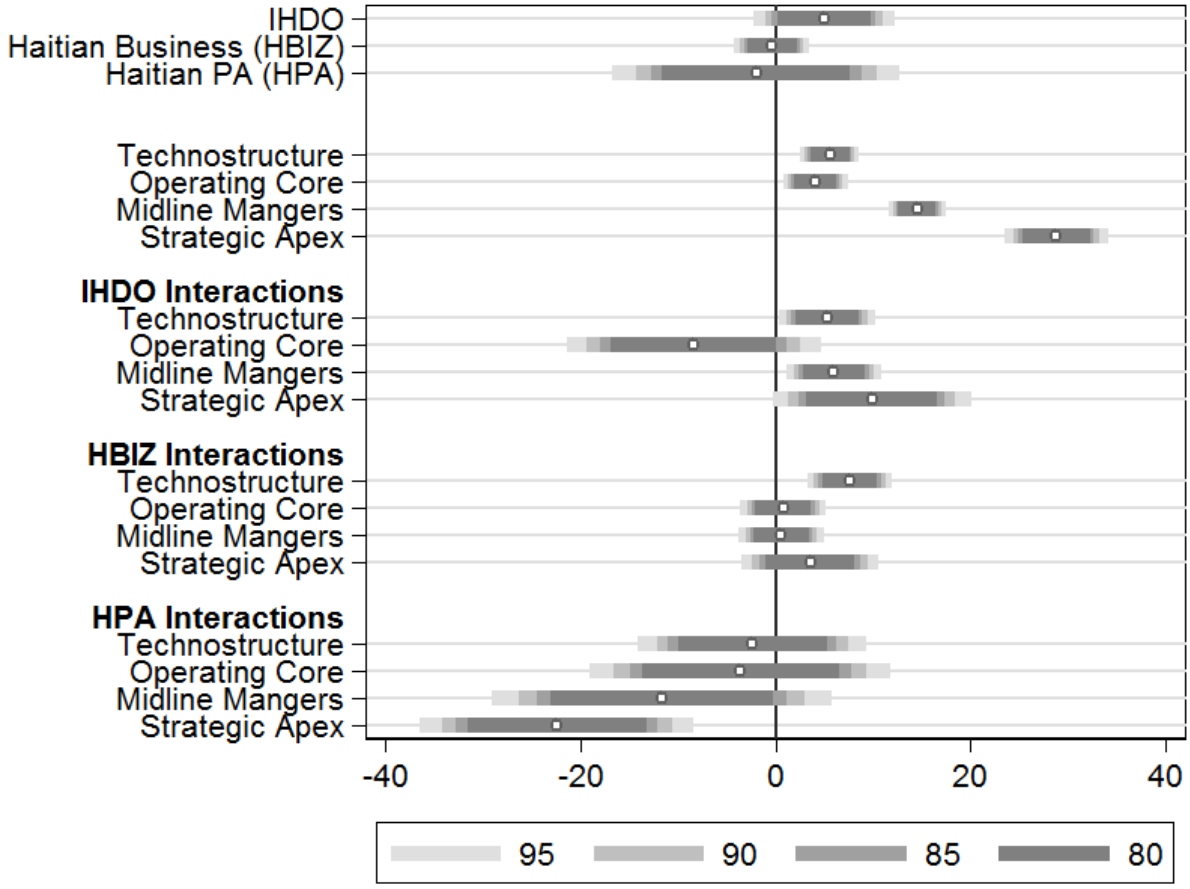
[a] Referent categories are IHDO (org. is not international humanitarian development org.); Sector (public goods and services); Position (other); Supervision (Constant); Professional Experience (0 to <2yrs); Computer Literacy (None required for position); Education (Less-than University); Mintzberg Design (Support Staff); Interactions (IHDO x Support Staff); Observation Period (2011)

The third and final hypothesis of the conditional-wage hypothesis predicts international, humanitarian and development organizations pay salary premiums for only certain positions. To test this hypothesis, we create a cross-level interaction. One option is to interact the dichotomous variable IHDO (where values equal to 1 indicate the employer is an IHDO) with position type. However, interacting the IHDO variable on the numerous values in the position category variable creates fourteen new cross-level interactions. Instead, we replace the fourteen position category variables with the five Mintzberg design category variables, and then add appropriate cross-level interactions. Model 6 shows the results of the hypothesis testing, cross-level interaction model. The simultaneous substitution of position categories and the inclusion of the cross-level interaction decreases the BIC value by over 8 points, which is moderately strong evidence that the inclusion of these cross-level interactions improves the model's ability to fit the data.

The main effects representing position in Model 5 and Model 6 are approximately comparable. In Model 6 the IHDO variable regains its statistical significance ($z=1.97$, $p<0.05$). As a group, we cannot reject the hypothesis that the effects of the cross-level interactions are simultaneously zero at the 0.05 level ($X^2(4)=4.16$, $p>0.35$). Therefore, with respect to the third conditional-wage hypothesis, there is no evidence supporting (or suggesting) that IHDOs pay a salary premiums for only certain positions. In fact, the only evidence supporting hypothesis three surfaces when the human capital factors are removed and interactions are kept (Model 7). The omission of human capital factors causes the remaining position-level covariates—i.e., position and position-interactions—to absorbed the level-1 variation in salary. This has the dual effect of shrinking the standard errors and increasing the effect size of remaining covariates. The almost 500 point increase in the BIC value indicates Model 7 less effectively fits the data.

The advantage of Model 7 is how easy it is to interact the Mintzberg positions across employer types. Assuming for a moment that human capital factors are unavailable, **Figure 8** plots the effect sizes and confidence intervals for IHDOs, Haitian Businesses (HBIZ), and Haitian Public Administration (HPA). Similar to Model 7, each employer type is interacted with the Mintzberg positions. Many of the above findings hold, but interesting effects stand out when positions are compared across employer types. For example, the midline managers and strategic apex positions have noticeably different effects in the IHDO versus Haitian public administration interactions. However, Figure 8 is misleading and the results in Table 8 suggests most (if not all) its effects can be explained by the careful collection and analysis of human capital factors.

Figure 8: Effect Size & Confidenc Intervals for Mintzberg Positions (interacted by employer type)



It is entirely possible, and perhaps quite probable, that for any given position the expected qualifications varies by employer. Strong demand from a certain industry for a particular skillset could very well increase the value for that skillset across the economy. Such effects are not modeled here because this study did not have space to assess whether, and to what degree, the expected qualifications for a particular position varies across employer types. This is not an inconsequential question and deserves investigation if possible.

Both Model 5 and Model 6 adequately explain variation in salary. Turning to measures of R^2, which for HLM models is defined as the proportional reduction in prediction error relative to an empty model, the organizational model (Model 4) reduces the prediction error of factors associated with salary by 35% as compared to Empty Model 3. The human capital model (Model 5) and the Mintzberg interaction model (Model 6) each reduce the prediction error by 56% and 55%, respectively, as compared to Empty Model 3[10]. Here again, the two models are approximately equal with respect to their ability to fit the data. The lower BIC value in Model 6 implies it the preferred model.

Discussion

This paper introduces the conditional-wage hypothesis to explain and predict the variation in salaries. Conditional-wages predict higher(lower) salaries for positions depending on the complexity(simplicity) and uncertainity(predictability) of the organizational environment. The conditional-wage hypothesis generates three formal hypotheses carefully tested using original data collected from expert respondents of 122 formal employers in Haiti in 2011 and 2016. These respondents provided 1,309 individual-level responses for salary, position, and qualifications,

[10] These quantities are computed based on the level one explain proportion of variance formula (7.2) in Snijders and Bosker (1999).

which were combined with organizational-level data and then analyzed using cross-classified random effects model.

After partitioning variance in salary to the employee (level-2) and employer (level-1) levels, the data show less-than three-fourths of the variance of salary is explained by employee-level characteristics. The analysis made two attempts to isolate and identify the labor-donation effect in the data (Model 1 and Model 2 in Table 6). In confirmation of the first conditional-wage hypothesis, this study finds no indication of the significance of legal form. This rejects the applicability of labor-donation theory to the complex and uncertain environment such as Haiti.

This theory testing yielded two additional results that conform to the conditional-wage hypothesis. Firstly, it found partial evidence that Haitian public administration is associated with a significant salary discount. While inconclusive and deserving further study, this result is unsurprising since the last systematic study of Haitian public administration salaries was conducted by Terrell (1993) using a 1987 survey of 564 Haitian employees. In that study, Terrell found that in the post-Duvalier era of Haiti, positive public sector wage differentials existed in Haiti because of monopolistic rents (i.e., patronage). That finding conforms with the conditional-wage hypothesis that predicts public administration does(does not) pay a salary premium conditional on its environment (e.g., authoritarian versus democratic regime type) and personnel needs (e.g., whether the hire is part of a clientelistic network). Now that Haiti is thirty-years removed from its 'president for life' regimes, Haitian public administration salaries are conditional on environmental factors other than dictators' clientelistic practices. Secondly, these findings upend the common wisdom that international NGOs (INGOs) pay a significant premium relative to other organizational types. One possible explanation for this is that INGOs are not a monolithic group and instead operate across a wide variety of subsectors. This too matches the predictions of

the conditional-wage hypothesis that predicts INGOs do(do not) pay a salary premium conditional on their environment (i.e., the sector in which they operate) and personnel needs (i.e., whether the position is difficult to staff). In other words, it is wrong to conclude that all INGOs, which share only legal form and non-Haitian origin yet vary in so many other ways, categorically and consistently pay a significant salary premium. In fact, such an arrangement seems riddled by the collective action problem and makes available the exploitation of the many by the few (Olson, 1971 [1965]).

After rejecting the applicability of theories that predict salaries primarily based on an organization's legal form, this study turned its focused to organizations that shared two characteristics as reported by organizational leaders: (i) that organizations were international in origin; (ii) that their primary operations were either economic development, humanitarian assistance, or international development. Organizations that met these two necessary conditions were classified as International Humanitarian & Development Organizations (IHDOs). This classification includes formal employers self-identified as nonprofit and non-business (Table 7). In confirmation of the second conditional-wage hypothesis, this study found robust evidence that this singular organization type more effectively explained variation in salaries. The explanation for this, according to the conditional-wage hypothesis that privileges environment and context, is that the similar work undertaken by these organizations causes them to encounter similar environmental challenges (complexity, uncertainity) and operate under similar institutional contexts that similarly—though separately—shapes the personnel management practices of each IHDO. Further study of the environmental and contextual factors that affect IHDOs is required. Future scholarship should consider grouping research into agendas covering broad topics such as economics (levels and sources of funding, labor market conditions, stocks of human capital,

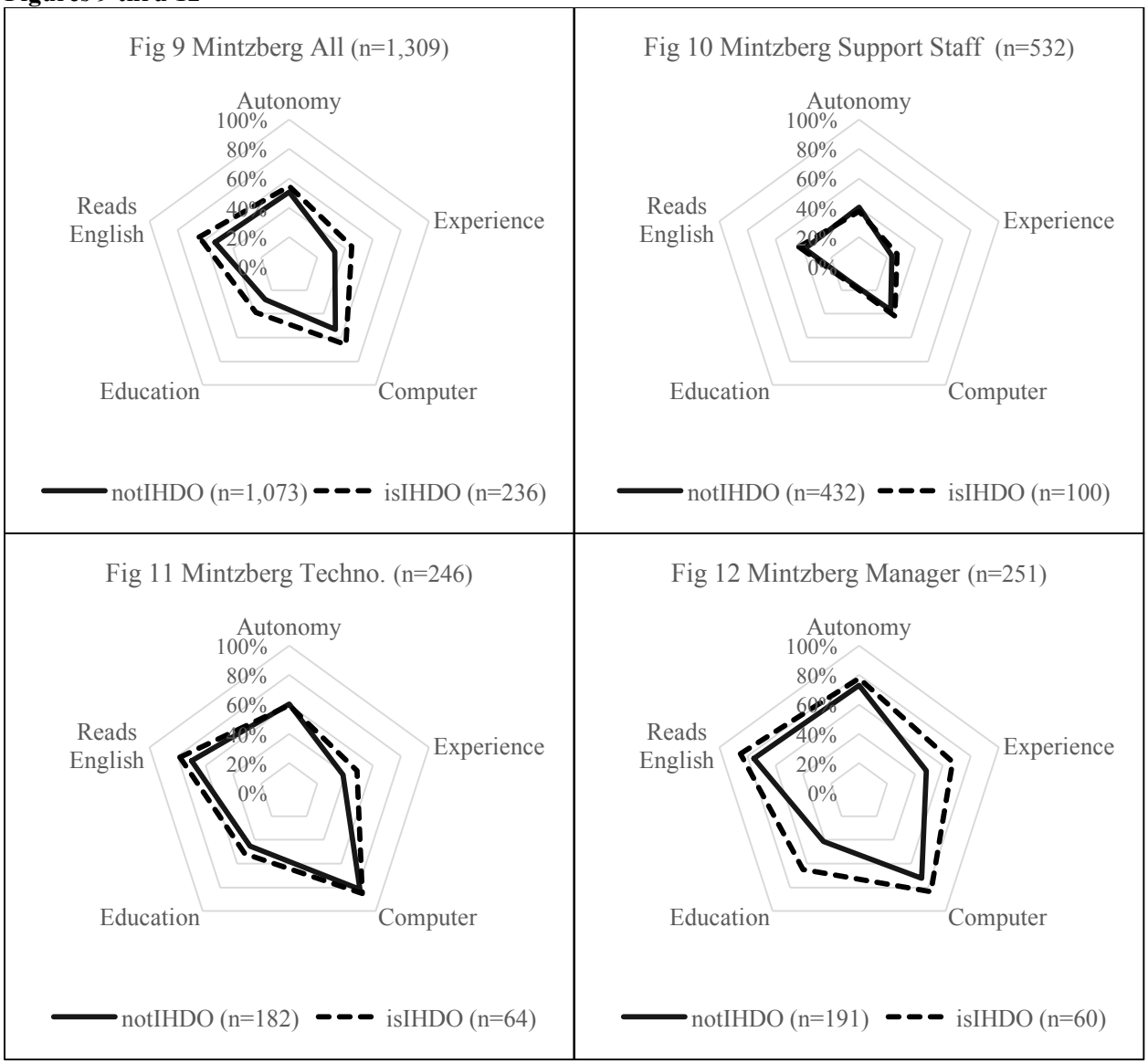
strengths and weaknesses of local for-profit sectors), politics (regime type, demands of regulatory environment, state capacity, private associations), and institutions (characteristics of funding arrangements; expectations of funders, local governments, local civil society, and local beneficiaries).

We notice the effect size of the IHDO organizational-level factor decreases with the inclusion of human capital controls and its significance varies depending on how positions are categorized (Model 5 and Model 6, Table 8). After establishing the importance of the IHDO organizational factor, this study analyzed whether IHDOs salary premiums varies across position categories (Model 6). When organizing positions according to the Mintzberg typology (Mintzberg, 1979, 1980, 1983) and interacting those categories with the IHDO variable, the model finds no statistical evidence that IHDOs pay an inconstant salary premium, which is evidence against the third conditional-wage hypothesis.

One advantage to the aggregated position categories of the Mintzberg interaction model (Model 6) is the ability to use organizational theory to explore larger swaths of the data. **Figures 9 thru 12** select the data's three most represented Mintzberg positions and uses radar plots to compare average human capital responses across non-IHDOs (solid lines) and IHDOs (dotted lines). These graphs suggest that for support staff, non-IHDOs and IHDOs have similar expectations across all five human capital factors. The same is generally true for technostructure positions. For managers (Figure 12) there appears to be general agreement across non-IHDOs and IHDOs for three human capital factors (English literacy, worker autonomy, computer training) while IHDOs seemed to prefer higher levels of education and experience. These results are inconclusive, but they do suggest an endogenous relationship between IHDOs, the desired qualifications they have for managers, and the 'market-rate' at which these qualifications are

valued in the local labor market. Future research into the mechanism(s) underpinning these relationships should be given priority by parties interested in economic development, humanitarian assistance, international development, and state-building.

Figures 9 thru 12



Conclusion

Do cross-sector wage differentials exist in developing countries? If so, under what conditions do they persist? This study reviewed four theories positioned to address these questions.

The literatures of two sector-based theories are predominately employee-centered approaches—public service motivation (Perry, 1997; Perry & Wise, 1990) and labor donation (Leete, 2001; Preston, 1989)—and suggest employees agree to receive a discount because they are intrinsically motivated by the work they do. Unfortunately, these theories have mixed results when studied in the developed democracy contexts in which they originated, and are untested in developing countries such as Haiti. Other theories are sector-agnostic and advance an employer-centric approach. The first, efficiency wages (Yellen, 1984), predicts employers tactically use salaries to hire the people they need and want. Underpinning this approach is the arguments that above-market wages pay for themselves in cost savings and productivity. The second, Contingency Theory (Burns & Stalker, 1961; Lawrence & Lorsch, 1967), emphasizes the environment in which organizations exist as the pillar of its theoretical approach. This theory predicts organizations act and adapt as necessary to survive in their environment. These latter theories are complementary and are combined in this study to introduce the conditional-wage hypothesis that predicts higher(lower) salaries for positions depending on the complexity(simplicity) and uncertainity(predictability) of the organizational environment.

This conditional-wage hypothesis generated three formal hypotheses that were carefully tested using original data collected from expert respondents of 122 formal employers in Haiti in 2011 and 2016. These respondents provided 1,309 individual-level responses for salary, position, and qualifications, which were combined with organizational-level data and then analyzed using a cross-classified random effects model. *H_1: The conditional-wage hypothesis predicts no support for the labor donation theory in the complex and uncertain environment of Haiti.* The data show over a quarter of variation in salary is attributable to organizational differences. However, in confirmation of the first conditional-wage hypothesis, this study finds no statistical evidence for

the claim that legal form—either as a group or individually—is associated with salary. Therefore, this study presents evidence that rejects the applicability of labor donation to complex and uncertain environments, such as Haiti. Similarly, this study finds no evidence supporting the common wisdom that international NGOs (INGOs), simply because of their legal form and national origin, pay a significant premium relative to other organizational types. One possible explanation for each result is that organizations of the same legal form, or subtypes of a legal form such as INGOs, are not monolithic in nature and instead vary in many ways and each adapts incrementally (and adjusting salaries as necessary) to survive in its environment and under its institutional context. This conforms with the conditional-wage hypothesis that predicts organizations do(do not) pay a salary premium conditional on their environment and personnel needs.

H_2: The conditional-wage hypothesis predicts certain organizations—international, humanitarian and development organizations (IHDOs)—pay salary premiums in Haiti. After rejecting the applicability of theories that predict salaries primarily based on an organization's legal form, this study turned its focused to IHDOs, which meet two necessary conditions: that the organizations are international in origin, and that they primarily operate in the economic development, humanitarian assistance, or international development subsectors. In confirmation of the second conditional-wage hypothesis, we find evidence that these organizations pay a salary premium. But its effect size decreases with the inclusion of human capital controls and its significance varies depending on how positions are categorized. The explanation for this, according to the conditional-wage hypothesis, is that the similar work undertaken by these organizations leads them to encounter similar environmental challenges and operate under similar institutional contexts that similarly shapes the personnel management practices of each employer.

H_3: The conditional-wage hypothesis predicts these international, humanitarian and development organizations pay salary premiums for only certain positions. The models are unable to confirm the third conditional-wage hypothesis and finds no statistical evidence that IHDOs pay an varying salary premium. These results are inconclusive and suggest an endogenous relationship exists between IHDOs, the desired qualifications they have for certain positions, and the market value these qualifications carry in the local labor market. Closer examination and future research should attempt to unpack these black-box mechanisms.

For several reasons, it is difficult to determine the extent to which this data and subsequent analysis is representative of Haiti's entire labor market. For reasons already discussed, the Haitian public administration does not seem equipped to provide the deep, reliable data necessary for longitudinal or panel analysis (it is unfortunate that this lack of necessary state capacity may itself be an outcome that the IHDOs salary-premium has on public and private employers in Haiti). Nevertheless, some information regarding salaries circulates among employers. International consulting agencies, such as Birches Group, LLC, conduct salary surveys each year using a combination of interviews and surveys. These for-profit endeavors are not done as charity and some organizations—especially smaller businesses and local nonprofits—may find participation cost prohibitive. The unintentional exclusion of these smaller players presumably creates an elite-organization bias within the salary survey reports. This elite bias could be corrected by either asking international organizations such as the U.N., The World Bank, or the Inter-American Development Bank to financially sponsor the inclusion of a representative sample of underrepresented groups. It might also be corrected by consultancies, such as the Birches Group itself, by including in its data collection efforts additional underrepresented groups as the quantity of survey underwriters surpass certain subscriber thresholds.

The urgency in correcting this elite bias depends on how the salary survey reports are used. If the confidential salary and benefits information are shared exclusively among IHDOs, then they may have an isomorphic effect on these international organizations for several theoretically supported reasons. First, by *mimicry* of salary and benefits towards the 'participant-mean' as opposed to the true 'market-mean'. Such mimicry occurs when salary information becomes common knowledge and pulls compensational outliers towards the group's average. Second, by *coercive* regulatory pressures that force organizations to legitimize themselves in the eyes of stakeholders. Here, survey clients may use the compensation reports as a tactic to signal credibility to funders and stakeholders. Finally, *normative* forces from similar salary survey participants may use social forces to compel others to adopt certain compensation policies. If IHDOs are in fact regular underwriters to these salary survey consultations then a better understanding of why they are commissioned, how they are used, and what/who is omitted can go a long way in determining why wage differentials exist and what causes them to persist. Because, as this research has shown, single-level studies and oversimplified categorizations of employers are insufficient approaches to the study of complex and uncertain environments.

APPENDIX

Table 8.2: Cross-Classified Random Effects Model with Human Capital Controls

	(4) Org. Model	(5) Human Capital Controls	(6) Mintzberg Interactions
IHDO [a]	8.92**	5.01+	5.89*
Located Ouest/PAP	5.59***	3.53*	3.94**
Position [a]	YES	YES	
Supervision [a]			
Requires Daily/Weekly Supervision		0.86	0.88
Requires Weekly/Bi-weekly Supervision		2.08*	2.21*
Requires Little (Monthly or Longer)		5.81***	6.06***
Professional Experience [a]			
Two to Less-than 5yrs Required		0.56	0.81
Five to 10yrs Required		3.23***	3.77***
More than 10yrs Required		16.51***	17.32***
Computer Literacy & Training [a]			
Given Full On-the-Job (OTJ) Training		-1.50	-2.26
Given Partial OTJ Training		0.68	0.05
Must Possess Skills (No OTJ Training)		3.76***	2.79**
Education [a]			
University		2.39**	1.96*
More than University		10.82***	10.67***
Reads English		3.45***	3.61***
Mintzberg Design [a]		YES	YES
Interactions [a]			YES
Observation Period 2016 [a]	2.74*	0.52	1.25
Constant	0.55	-4.64+	-6.74*
Random Effects	Var.Comp.(SE)	Var.Comp.(SE)	Var.Comp.(SE)
Crossed random effect:			
τ_w^2=var(W_f) observation year	0.00 (0.000)	0.00 (0.000)	0.00 (0.000)
Level-two random effect:			
τ_0^2=var(U_{0j}) organization	46.61 (7.903)	34.68 (7.659)	36.54 (5.988)
Level-one variance:			
σ^2 = var(R_{ij})	130.07 (5.379)	84.30 (5.984)	85.88 (3.518)
BIC	10,420.20	9,951.09	9,942.64
Observations	1,309	1,309	1,309
Groups	122	122	122

Full Model Not Shown

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

[a] Referent categories are IHDO (org. is not international humanitarian development org.); Sector (public goods and services); Position (other); Supervision (Constant); Professional Experience (0 to <2yrs); Computer Literacy (None required for position); Education (Less-than University); Mintzberg Design (Support Staff); Interactions (IHDO x Support Staff); Observation Period (2011)

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