

Wage differentials and Determinants in the Haitian Labor Market¹

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Abstract: Wages are a key factor to competitiveness and to attract foreign investors. This paper examines wage differentials and determinants for the Haitian economy.

Using a dataset of 953 observations from 83 organizations with a semi-log regression model, we show, in addition to professionals' qualifications and skills that organizations' origin, type and sector determine the level of wages.

The paper's results can guide various stakeholders of the Haitian economy open for business. First, it can help employers take a closer look at the market wages to improve their firm performance. Second, it can help foreign investors better understand Haitian labor costs, a key determinant of investment. Finally, it could serve to policy and law makers to improve the economy competitiveness.

Entrepreneurs, Investors, Professionals and Policy makers will be particularly interested by the tables with the average wages at pages 18 to 23.

The JobPaw Group makes available the specific wage for any position according the experience, the language, the level of supervision, the sector, the type and the origin of the organization.

If you are interested to have the wage for a specific position, we can write us at: info@jobpaw.com.

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1. INTRODUCTION

Despite of well-documented studies and interest for wage differentials and determinants, little economic study has been focused on this topic specifically to the Haitian labor market.

The present research paper, DeMatte and Waddle (2013) constitutes an attempt to fill this gap. It brings new insights on the determinants and differential of wages in the Haitian labor market by including data from the public sector. It is very relevant to the context of Haiti open for business as it is well known that wages are a key factor to competitiveness and to attract foreign investors.

Using a dataset of 953 observations from 83 organizations with a semi-log regression model, DeMatte and Waddle (2013) show that: i) the environment in which an organization is headquartered matters because larger city populations increase salaries; ii) the organization itself is an important consideration since factors such as organizational structure, country of origin, and sector of economic activity have all been proven to affect salary; iii) the position and the expectations that come with it with respect to supervision and computer training significantly affect salary; iv) the employee herself can possess certain skills and attributes that increase her earning potential—i.e. increased level of education, increased professional experience, increased English literacy, and being an expat.

The paper is organized as follow. Section II discusses the related literature on labor market. Section III explains the rigorous process of collecting data. Section IV a summary and description of the data collected. Section V presents the model to estimate the data. Section VI analyses the results of the model. Section VI concludes with area for future investigation. Background of the Haitian economy, wages estimates, and a complete regression output are presented in Appendix.

2. RELATED LITERATURE

Wage differentials and determinants have always interested economists as attested the early works of Dunlop (1957), Slichter (1950), Rapping (1967), Masters (1969), and Kumar (1972), and other institutional economists.

These early investigations not only showed the existence of high earnings dispersion but also provided initial insights into the existence of a pattern of wage differentials. Dunlop (1957) showed large variance of average wages for truck drivers, ranging from a maximum of \$2.25 to a minimum of \$1.20 across industries. Slichter (1950) found high correlations across occupations and stable wage differentials over time for the US economy. Rapping (1967), Masters (1969), and Kumar (1972), among others, focused on estimating the effects on the average industrial wage dispersion of several industrial characteristics, such as profits, degree of concentration, union density, and the size of the firm

New interest in the topic of wage differentials sprang up again in recent years, with the studies by Krueger and Summers (1987, 1988), Dickens and Katz (1987a, 1987b), and Groshen (1986) who found that workers with identical characteristics receiving different wages across industries. What is distinctive about the recent generation of empirical studies is both their methodology and theoretical background. In terms of methodology they provide new tests for the existence of inter industrial and establishment wage differentials and for the regularities of their patterns, using improved econometric techniques and extensive controls for worker and job characteristics.

In fact, the studies in western countries mentioned above found that wage differentials are stable across time and countries and highly correlated across occupations and firm sizes. If wages studies in western countries are well documented, research on wage differentials in Latin American Caribbean (LAC) countries is more dispersed and more difficult to track down.

One of the investigations that more directly address the topic of wage differentials in Latin America is Ferreira da Silva's (1987) study for Brazil. He found that the main

determinants of earnings were the individual worker's characteristics, but that firm, industry, and regional characteristics were also significant, after controlling for human capital variables. Fields and Marulanda (1976) found that for the Colombian manufacturing sector higher (average) wages were associated with more capital-intensive sectors, with high foreign investment, and larger firms.

Macedo (1985) investigates a special aspect of the wage relation, i.e., wage differentials between private and public firms in Brazil. His results show that higher wages are paid in the public sector, even after controlling for worker characteristics. However, the general applicability of his conclusion is not very strong, since the results with human capital controls refer only to a comparison between two firms.

Other studies examine the influence of industrial attributes on wages, but mainly as extensions (control-variables) in human capital type models. In Castello Branco (1979) the degree of concentration has a positive effect on the average industrial wage for Brazil. Salazar Carrillo (1982) finds a non-significant effect for size of firm on individual earnings; however, these results must be affected by the small sample size variance.

In general, most of the studies for LAC countries focus on Latin American countries and neglect Caribbean countries except Souza and Tokman (1978) who studied data from Dominican Republic, Paraguay and Salvador households to show that occupation, industrial sector and size of firm variables can explain nearly 25% of residual wages. Workers with similar characteristics earn 40% more in the formal than in the informal sector.

Despite of those well-documented studies and interest for wage differentials and determinants, little economic study has been focused on this topic specifically to the Haitian labor market. While Pean (2009) and Verella (2009) have written on minimum wages in Haiti, to the best of our knowledge, DeMattee (2011) was the first to perform a decent work by studying how professionals' qualifications and skills, organizations' origin, type and sector determine the level of wages in Haiti. However, his study was limited because his dataset did not include a public sector dimension.

The present research paper, DeMattee and Waddle (2013)—together with the one mentioned above—constitutes an attempt to fill this gap and bring new insights on the determinants and differential of wages in the Haitian labor market by including data from the public sector. It is very relevant to the context of Haiti open for business as it is well known that wages are a key factor to competitiveness and to attract foreign investors.

3. DATA COLLECTION PROCESS

Information asymmetry among employers is one of the many challenges facing the Haitian labor market. Prior to this research various organizations had attempted or completed salary surveys on their own. Business alliances drove some of these surveys while consulting agencies organized by a consortium of NGOs performed others. Although we were not allowed to see the results of earlier surveys they were told of their existence and shortcomings. First, with respect to the business alliance, there was unwillingness among members of the business community to share with each other confidential salary information. This is understandable and the researchers were able to overcome this challenge by taking the position of an uninterested party and maintaining a promise of confidentiality to the organizations that contributed data to the research. Second, with respect to the consulting agencies, the salary survey conducted for NGOs were limited to NGOs in or near Port-au-Prince and sampled fewer than twenty organizations and its results were not shared outside the group of NGO clients.

The scope of the data collection for this current research was throughout Haiti, not just Port-au-Prince, and targeted organizations of many sizes, types, nationalities, and purposes. The findings will be made available to all participants and other interested stakeholders but data will remain confidential.

All data was obtained by working closely with hiring managers. Managers were asked to report the budget they had for a particular position, an accountant for example. Managers reported a budget range that paid, for example, “acceptable” accountants the low-end of the budget range and paid “perfect” accountants the high-end of the range. The hiring manager was then asked to complete a survey and describe the characteristics of the “acceptable” accountant to deserve the low-end pay and what characteristics the “perfect” account must have in order to earn the high-end pay. This bookend-methodology framework allowed the data to quietly capture the change in characteristics as each hypothetical employee moved from the low-end to the high-end of the manager’s budget. In some cases, hiring managers were able to provide the salary and characteristics for a third, “midpoint”, and observation.

When DeMattee initially began his data collection in 2011, he thought that for every ten organizations he approached perhaps four or five would agree to participate in the study. As he started collecting the data more than nine out of ten organizations agreed to participate. Similarly, as Waddle worked with the public sector to expand the dataset he was met with a strong spirit of cooperation. While the motivations behind this high degree of cooperation were not explored, the researchers believe it is because managers and decision makers recognize the importance this work has on the Haiti’s long-term economic trajectory. The original data collection began in June 2011, and lasted five months. The additional governmental data was finalized in June 2013, and added to the dataset then. Hundreds of meetings were held over the course of two years to collect the data required to conduct this empirical research.

4. SUMMARY AND DESCRIPTION OF THE DATA COLLECTED

Absent from the earlier dataset of nearly 900 observations were salaries reported by the Republic of Haiti. These researchers sought to fill that void by collecting salary data from Haitian government in the same manner it was collected for the original dataset. The data for this research added sixty-eight observations to an already robust dataset assembled for the aforementioned work.

For the initial research, two surveys were created that allowed employers to easily provide nuanced data to the project. The surveys were professionally translated from English to French to eliminate language barriers. First, the Organizational Survey (see appendix for Attachment 1.1) is a one-page document that captures important employer information—e.g. size of the organization, its scope of activity, its organizational structure and nationality, etc. This information was completed once for each employer. Second, the Position Survey (see Attachment 1.2) is a multi-page document that contains nineteen questions. These two surveys and their twenty-six carefully worded questions were vetted for understanding and edited several times to achieve maximum understanding. Hiring managers provided unprompted answers and asked for clarification as needed. Surveys that were not fully completed were eliminated.

For the additional governmental data, the researchers worked with Haitian governmental officials to collect data in a similar manner. The process was streamlined slightly and respondents were asked to provide data only for those questions found to be statistically significant in DeMattee’s original work. While this strategy allows for greater precision to be added to the earlier model’s independent and category variables it does not allow the researchers to revisit predictors originally found to be unimportant and retest them for significance.

The researchers used a single data source to identify and measure how an organization’s characteristics and employee’s each affect salaries. The dataset was culled to 953 unique observations after the removal of outliers and incomplete observations. The observations

used were from 83 independent organizations ranging from two to 1,800 employees. Tables 1, 2, 3, and 4 provide a summary of the composition of the data with respect to city, organizational structure, economic sector, and position, respectively.

City Size	Frequency	Percent	Cumulative
Small & Medium	77	8.1%	8.1%
Large	187	19.6%	27.7%
Extra-Large	689	72.3%	100.0%
Total	953	100.0%	

Org. Structure	Frequency	Percent	Cumulative
NGO	201	21.1%	21.1%
For-Profit	529	55.5%	76.6%
Other	104	10.9%	87.5%
Religious	51	5.4%	92.9%
Government	68	7.1%	100.0%
Total	953	100.0%	

Table 1 shows the distribution of observation by city size, which is a high-level view of the data. City sizes range from 15,000 to 500,000 people. Over two-thirds of the data was collected from Port-au-Prince, the country’s most populous city with over a half-million people. Approximately 53% of observations from Port-au-Prince are from for-profit organizations and the balance was near equally split between NGOs and organizations identified as Other, Religious, or Government.

Econ. Sector	Frequency	Percent	Cumulative
Agriculture	53	5.6%	5.6%
Airlines	26	2.7%	8.3%
Banking	34	3.6%	11.9%
Construction	65	6.8%	18.7%
Education	95	10.0%	28.6%
Gas/Petro	39	4.1%	32.7%
Hotels	10	1.0%	33.8%
Humanitarian	112	11.8%	45.5%
Int’l Development	67	7.0%	52.6%
Manufacturing	67	7.0%	59.6%
Medical	62	6.5%	66.1%
Orphanage	14	1.5%	67.6%
Other	120	12.6%	80.2%
Retail	57	6.0%	86.1%
Service	92	9.7%	95.8%
Telecomm	40	4.2%	100.0%
Total	953	100.0%	

Tables 2 and 3 show the distribution of observations along two other dimensions at the more specific organizational level. Table 2 shows the dataset has large numbers of observations for all organizational structure types with the exception of Religious organizations, which represent less than 6% of the dataset. This project controlled for five organizational structure types and identified each as independently significant variables and each statistically different from organizational structure type NGO.

Table 3 shows the sixteen categories of economic sectors controlled for in the study. The variability in this control group is high with the largest percentage, 12.6%, belonging to the Other sector category, which includes governmental observations⁴. This paper will identify eight of these sixteen economic sectors as independently statistically significant while the group as a whole is statistically significant. Lastly, Table 4 shows the distribution of observations at the more granular level of position. There are twenty-two positions controlled for in the study—the most multifarious of any control group—with the highest concentrations of observations belonging to Senior Managers and Cleaning Crew, 13.2% and 10.2%, respectively. Seven of these category variables are independently significant while the group as a whole is statistically significant.

Position	Frequency	Percent	Cumulative
Accountant	66	6.9%	6.9%
Cleaning Crew	97	10.2%	17.1%
Cook	38	4.0%	21.1%
Doctor	11	1.2%	22.2%
Driver	7	0.7%	23.0%
Engineer	71	7.5%	30.4%
Executive	11	1.2%	31.6%
Handyman	66	6.9%	38.5%
IT Professional	26	2.7%	41.2%
Laborer	19	2.0%	43.2%
Mechanic	26	2.7%	46.0%
Messenger	27	2.8%	48.8%
Nurse	29	3.0%	51.8%
Office Manager	15	1.6%	53.4%
Office Staff	81	8.5%	61.9%
Other	73	7.7%	69.6%
Program Manager	28	2.9%	72.5%
Secretary	95	10.0%	82.5%
Security Guard	16	1.7%	84.2%
Senior Manager	126	13.2%	97.4%
Teacher	12	1.3%	98.6%
Waiter	13	1.4%	100.0%
Total	953	100.0%	

⁴ Government salary observations were merged with other salary observations when controlling for activity of economic sector for reasons of multicollinearity. The reason being is that it is not advisable to have two perfectly correlated variables in a regression model, which would have been the case for government salaries had those observations been coded to Government organizational type and Government economic sector variables.

This paper identifies and measures the independent effect various variables have on salaries, referred to henceforth as *salary drivers*. These salary drivers are mostly category variables and can be grouped into four broad categories: Geographical & Municipal, Organizational, Position, and Person. Table 5 shows these four broad groups and the variables controlled for in each.

The Geographical & Municipal group contains variables that control for differences in population. The Haitian Department of Information and Statistics (IHSI) provided city-level population estimates for the municipalities of Haiti for the year 2011. A city’s total population was reported in terms of urban and rural and reported in terms of the sections that compose the larger city.

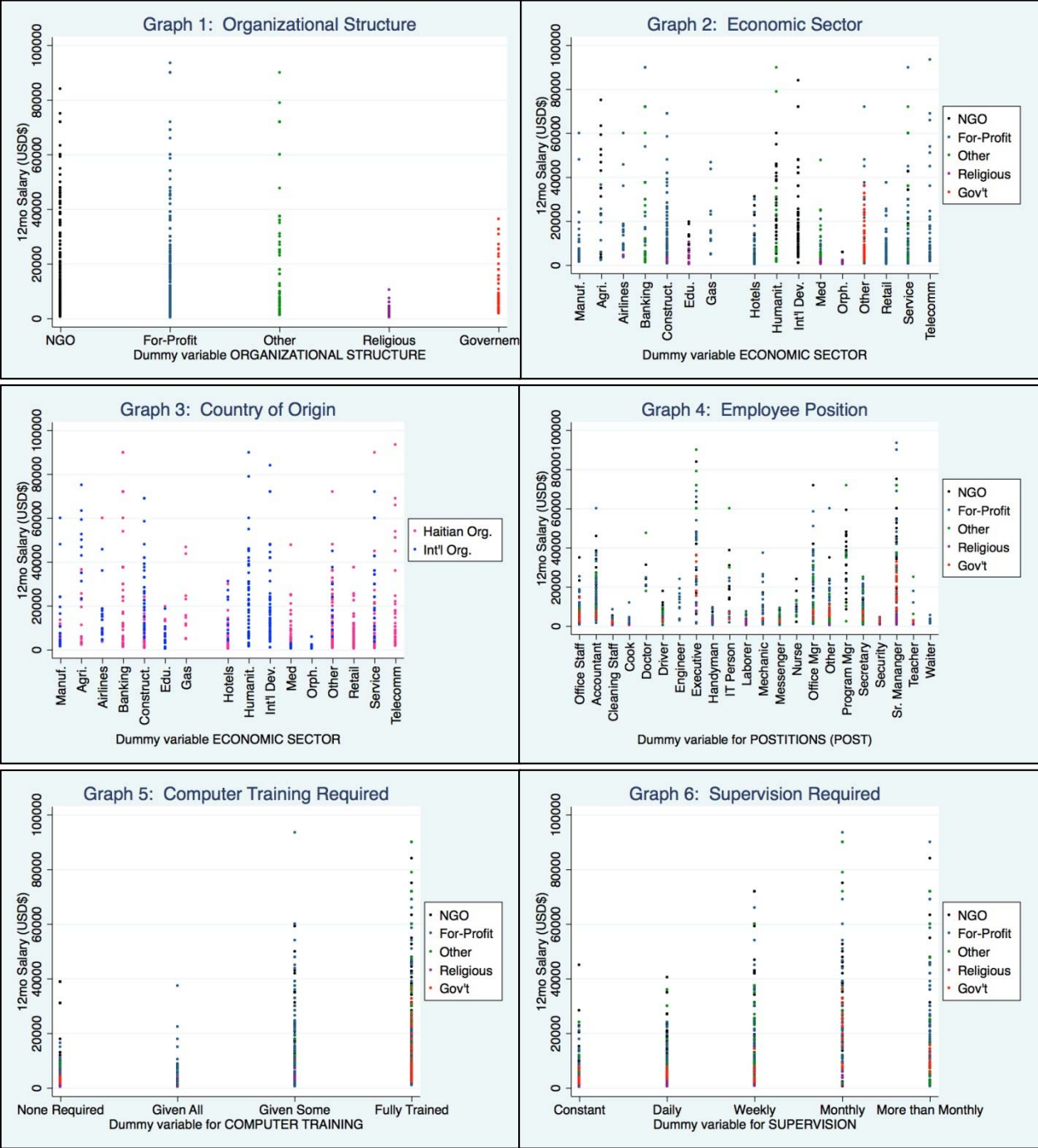
In DeMattee (2011) the Organization group collected data for many organizational characteristics in an attempt to control for differences between salaries. Only three were found to be statistically significant: Organizational Structure, Economic Sector, and Country of Origin. Additional data collected from the government include these three organizational category variables. All employers were self-identified themselves as one of four organizational structures: NGO, For-Profit, Other, Religious, or Government. Graph 1 shows the variability of wages along this dimension.

The second is the economic sector in which the employer operates. All employers identified themselves as belonging to one of sixteen economic sectors⁵. Graph 2 shows the variability of salary along this second organizational dimension while color-coding observations according to organizational structure type. The third was country of origin. All employers identified themselves as either Haitian or international organizations. Graph 3 shows the variability of salary along this dimension in each economic sector. As can be seen in Graphs 2 and 3, there is much variability in salary at the organizational level.

Table 5: Salary Driver Categorization			
Geographical & Municipal	Organizational	Position	Person
City Population	Organizational Structure	Position	Education Level
	Economic Sector	Computer Training	Professional Experience
	Country of Origin	Supervision Required	English Literacy Nationality

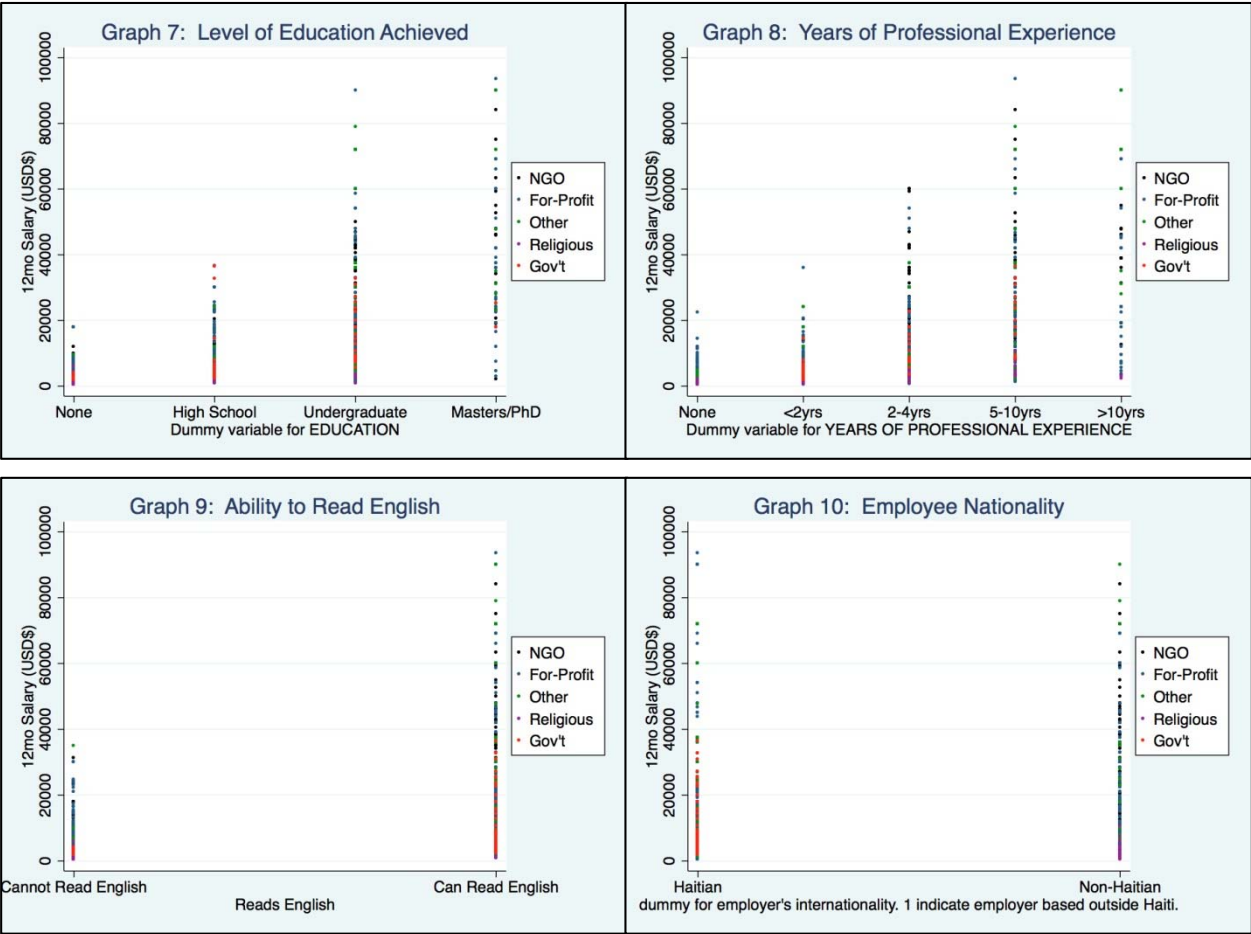
⁵ The sixteen sectors are: agriculture and farming, airlines, banking and finance, construction, education, gasoline and petro production, hotel and lodging, humanitarian, international development, manufacturing, medical, orphanage, other, retail sales, services, and telecommunication.

Determining the effect of government data on DeMattee (2011) is the primary goal of this research. This goal is accomplished by analyzing organizational-level variables while controlling for other position- and person-level variable groups. These groups control for the skills necessary to hold a position—e.g. an IT professional expected to have computer training—or characteristics that define a person—e.g. education level and years of professional experience. As Graph 4 shows, the variability of wages with respect to the twenty-two positions and organizational structure type is quite high. Necessary computer training and required supervision are characteristics of a position. If a position requires use of a computer intuition suggests that as an employee increases her computer proficiency her salary increases. This may be because training personnel on technology consumes organizational resources that may be costly and hence employers may be willing to offer higher salaries to those professionals with greater technology training. Similarly, the less supervision an employee requires the more valuable she maybe be to an organization. Intuitively this makes sense because there is an opportunity cost incurred when a manager's



time is spent supervising an employee and if the manager can minimize the time spent supervising she can spend time on more productive tasks. Graphs 5 and 6 show the seemingly positive relationship salary has with computer training and employee autonomy, respectively.

The remaining variables in the Person group pertain to an employee’s personal profile. This includes formal education received, years of professional experience, English literacy, and nationality. A priori, it would seem that education and years of professional experience are each positively correlated with higher salary. Graphs 7 and 8 seem to support this claim and the model mathematically proves this to be true. The employee’s ability to read English and the employee’s nationality are binary conditions that are statistically significant salary drivers. Although these effects are not as easy to recognize in Graphs 9 and 10, English literacy and international nationality are both positively correlated with salary, 0.48 and 0.32, respectively, and have relatively strong statistically significant coefficients in the model.



5. DATA ESTIMATION MODEL

The goal of the research is to identify the characteristics of organizations and employees that effect salary and precisely quantify those causal relationships. To that end, the researchers used omitted least square regression analysis to methodically eliminate insignificant variables and build a specification that successfully explains the variability in the data and can predict salaries.

Early analysis⁶ showed that the indicators have a non-linear effect on the dependent variable, Salary. The core specification regresses salary against variables from the aforementioned four groups of salary drivers. The final specification uses fifty-eight variables and its abridged form is as follows:

$$(1) \ln(\text{Salary}) = \alpha + \beta \text{Structure}_5 + \gamma \text{Position}_{22} + \delta \text{Population} + \epsilon \text{Sector}_{16} + \theta \text{Organization}_2 + \vartheta \text{Computer}_4 + \iota \text{Supervision}_5 + \kappa \text{Experience}_5 + \lambda \text{Education}_4 + \mu \text{English}_2 + \nu \text{Employee}_2$$

The subscript following each variable category represents the number of coefficients included in each category and includes the omitted variable. The *Structure* variable controls for the five types of organizational structures already mentioned. The *Position* variable controls for twenty-two position types. These two variable categories combine to explain slightly more than 50% of the variability in the salary data. At the geographic level, *Population* is a floating variable that controls for differences in city size. At the organizational level, *Sector* controls for the sixteen types of economic sectors in which an organization can operate. *Organization*, a binary dummy variable, controls for an organization's country of origin. At the position level, *Computer* controls for the amount of computer training required in a position while *Supervision* controls for the amount of supervision deployed by the employer to manage the employee. Finally, at the person level, *Experience* controls for a person's years of professional work experience while *Education* controls for the amount of formal education received by the individual. *English* is a binary dummy variable that controls for a person's ability to read English and *Employee*, another binary dummy variable, controls for the nationality of the employee.

Table 6 presents results from the final specification and reflects simple before-and-after estimates that each addition to the specification has on the predictive power of the model. The authors chose to use organizational structure as the foundation and added to it methodically to increase the predictive power of the model. The table shows an increasing Adjusted R-squared as more variables are added to the model. This is interpreted to mean that each inclusion of new variables increases the model's ability to explain the variability of the dataset by an additional six to thirty-five percentage points, depending on the iteration. The resulting specification in column six is a good predictive model. It includes 953 observations and uses fifty-eight variables to explain 79.28% of the variability in the salary data, as represented by the R-squared⁷. The ratio of variables to observations is low, approximately 1:16, and most of the predictors are individually statistically significant but at the very least belong to a statistically significant group.

Table 6 seems to disprove the commonly held belief: "In Haiti, NGOs pay much higher wages for a particular position than for-profit businesses. Some pay two, three or four times as much." The model does support the claim that NGOs pay higher wages than other organizations; in fact they pay on average 47% more⁸.

⁶ Box-Cox test results suggest a Theta power of 0.094 is the best fitting transformation, which is nearer zero and closer to the non-linear functional form. A semi-log specification generates a more positive "log likelihood score": -9.327 versus -10.018.

⁷ The R-squared measure is not included in Table 6 because the model's degrees of freedom changed as new variables were added. The Adjusted R-Square measure is a better metric to compare similar models of the same functional form.

⁸ Holding all else equal, the effect of leaving an NGO to work for a For-Profit employer is predicted to change salary by $100 \times (e^{-0.2074252} - 1)\% = -18.73\%$; leaving a For-Profit to work for an NGO employer will change salary by $100 \times (e^{0.207452} - 1)\% = 23.05\%$. The average change in salary from any of the four organizational structure types to an NGO is 46.59%

Table 6: Total Effect of Salary Drivers on Salary						
Dependent Variable is ln(Salary)						
geometric mean ln(Salary) = 6.972973						
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Organizational Structure Dummies</i>						
<i>For-Profit</i>	-0.74*** (-8.12)	-0.44*** (-5.95)	-0.41*** (-6.08)	-0.24* (-2.20)	-0.36*** (-3.68)	-0.21* (-2.29)
<i>Other</i>	-0.094 (-0.72)	-0.023 (-0.22)	-0.23* (-2.41)	-0.16 (-1.38)	-0.39*** (-3.73)	-0.32*** (-3.34)
<i>Religious</i>	-1.98*** (-11.56)	-1.53*** (-10.78)	-0.90*** (-6.42)	-0.71*** (-4.51)	-0.47** (-3.26)	-0.54*** (-4.22)
<i>Government</i> (omitted variable = NGO)	-0.64*** (-4.16)	-0.57*** (-4.71)	-0.77*** (-6.87)	-0.35 (-1.88)	-0.65*** (-3.90)	-0.43** (-2.92)
adj. R-sq	0.150	0.507	0.579	0.644	0.719	0.779
N	953	953	953	953	953	953
t statistics in parentheses	* p<0.05		** p<0.01		*** p<0.001	
<i>Control Variables Included (Y signifies inclusion in the model)</i>						
City Population			Y	Y	Y	Y
Organizational Structure	Y	Y	Y	Y	Y	Y
Economic Sector of Activity				Y	Y	Y
Organization's Country of Origin				Y	Y	Y
Position Type		Y	Y	Y	Y	Y
Computer Training					Y	Y
Supervision Required					Y	Y
Educational Level						Y
Years of Professional Experience						Y
English Literacy						Y
Employee Nationality						Y
(1) Structure includes the five types or organizational structures controlled for in the study.						
(2) Position includes the twenty-two unique positions controlled for in the study.						
(3) Geography includes variables that control for geographic differences, specifically city size.						
(4) Organization includes an organization's activity in sixteen economic sectors and country of origin.						
(5) Characteristics include characteristics needed in the position, e.g. computer training and supervision.						
(6) Skills include skills possessed by an employee.						

A series of tables in the appendix calculates specific salary estimates for unique structure, sector, and position permutations while using means for all other variables. These estimates, while easily presented in a series of tables, are imprecise because of the manner in which they are calculated. As shown above in Equation 1, there are fifty-eight variables that group into eleven categories. To properly calculate a salary estimate an individual would use only one point estimate in each variable category multiply all other point estimates in the category by zero. To present these findings in table form would require an eleven-dimensional table. As this is an impossibility DeMattee and Waddle present their estimates along three dimensions: i) a series of tables in Section B of the appendix controls for organizational structure type; ii) the vertical axis of each two-dimensional table controls for economic sector; and iii) the horizontal axis controls for position type. These are only three of the eleven variable categories, however. The point estimates in each of the remaining variables categories are multiplied by the relative frequency a characteristic was represented in the data of a particular position type. For example, in the dataset 15% of the observations are coded as having no professional experience. While this frequency is true for the dataset it is reasonable to assume that it varies by position type—e.g. Cleaning Crew position (97 observations) and the Engineer position (71 observations)—and therefore relative frequencies were calculated not at the more precise position-level.

The first table (NGO Organizational Structure Type) in the series presented in Section B provides a concrete example. An Accountant, working in the Banking sector, employed by an NGO has a predicted salary of \$23,329. To calculate this prediction the point estimates for the respective Position, Sector, and Organizational Structure were multiplied by one (all other point estimates in those three variable categories were multiplied by zero) and the remaining twenty-two point estimates of the remaining eight variable categories were multiplied by the relative frequency each characteristic had within the Accountant observations—e.g. 6% had zero professional experience, 22% had less than two years of professional experience, 40% had between two and four years, 26% had between five and ten years, and 6% had more than ten years. These relative frequencies were then recalculated for each position type and used to calculate each estimate in the series of tables. Had relative frequencies been calculated at the data-level instead the prediction would have fallen to approximately \$16,550. These estimates are tangible examples of how wages change by leaving one organizational structure for another; however, a mathematical model is more precise. Predictions can be found by selecting desired characteristics and calculating their point estimates, which are presented in Section C of the appendix.

The average premium paid by an NGO over all other organizational structure types is too blunt an explanation of the statistics. The specification provides a more thorough explanation of the trade-offs faced in the labor market; specifically, if an individual leaves the employment of an NGO it is expected that salary will change by -19% if moving to a For-Profit employer, -27% if moving to an Other employer, -35% if moving to a Government employer, -42% if moving to Religious employer. Hypothesis testing was conducted to see whether organizational structures types were statistically different from NGO structure type. Individual hypothesis testing rejected those four null hypotheses⁹ with 95% or greater certainty in each instance.

In addition to organizational structure, other variables were found to affect salary. As can be deduced from Table 7, an employee gaining possession any of any one of three characteristics will increase her salary significantly. Gaining the ability to read English (t-stat 4.26; p-value 0.000) or moving to an employer that is non-Haitian (t-stat 5.99; p-value 0.000) will increase salary by 27% and 52%, respectively. If an individual is a non-Haitian employee, a characteristic over which an employee likely has little control, her pay will be

⁹ The null hypothesis was that each individual organizational structure type was statistically the same as the NGO organizational structure type.

57% higher (t-stat 4.00; p-value 0.000). Other variables belong to groups that are slightly more difficult to interpret.

Variable	Coefficient	Exponentiated Value	Probability of the null
English Literacy	0.242	27%	0.000
Int'l Organization	0.422	52%	0.000
Int'l Employee	0.448	57%	0.000

Education, for example, is a variable group that has more than one variable. The research uses four variables ranging from no formal education to a graduate degree diploma. The findings, as shown in Table 8, support the intuition that increased education begets increased compensation (F-stat 10.52; p-value 0.000). For example, holding all else equal, if a person has a high school diploma her salary will be 25% greater than a person lacking formal education. This table should be interpreted carefully as coefficients represent changes to salary relative to the omitted value No Formal Education. It is typically the case that individuals increase education received incrementally; for example, when moving from high school to college to grad school. Such a two level progression would increase salary by 26% and 8%¹⁰, respectively, which appears to signal that investment in education has diminishing marginal returns.

Variable	Coefficient	Exponentiated Value	Probability of the null
None*	0	0%	-
HS Diploma	0.222	25%	0.003
University Degree	0.451	57%	0.000
Graduate Degree	0.528	69%	0.000
F-statistic for the group is 10.52, probability of the null is 0.000			
*Omitted Variable			

Variable	Coefficient	Exponentiated Value	Probability of the null
None*	0	0%	-
<2yrs	0.198	22%	0.004
2-4yrs	0.407	50%	0.000
5-10yrs	0.628	87%	0.000
>10yrs	0.978	166%	0.000
F-statistic for the group is 24.54, probability of the null is 0.000			
*Omitted Variable			

Similar to education, increased professional work experience increases salary but its effect is stronger. As shown in Table 9, professional experience can increase an employee's earning potential by as much as 166% (F-stat 24.54; p-value 0.000). When one compares

¹⁰ Holding all else equal, the effect of adding a college education to a high school education is predicted to change salary by $100 \times (e^{0.451} - 0.222 - 1)\% = 25.73\%$; and holding all else equal, the effect of adding a graduate education to a college education is predicted to change salary by $100 \times (e^{0.528} - 0.451 - 1)\% = 8.00\%$.

Table 8 to Table 9, one can see that employers value an employee with five to ten years of professional work experience more than an employee with a graduate degree. It is interesting to note that professional experience seems to have increasing marginal returns with each additional level of professional experience adding 22%, 23%, 25%, and 42%, respectively, to salary. In both groups of variables the model supports the intuition that individuals with increased education and increased professional experience earn higher salaries.

Supposing an employee’s salary is a function of the value she is able to generate for her employer less any costs it takes her to generate said value, then it can be inferred that if she is able to keep her costs down while delivering the same amount of value to her employer then her salary should increase. The aforementioned costs may be in the form of ongoing costs (such as required supervision by a manager) or one-time start-up costs (such as computer training). As shown in Table 10, as the required supervision over an employee decreases—i.e. the less time a manager spends supervising an employee—her salary increases (F-stat 12.75; p-value 0.000). Turning now to the one-time start-up costs of computer training, as shown in Table M, if an employee possesses more advanced computer training then she is positioned to earn a higher salary (F-stat 15.43; p-value 0.000).

Variable	Coefficient	Exponentiated Value	Probability of the null
Constant*	0	0%	-
Daily	-0.015	-2%	0.782
Weekly	0.106	11%	0.105
Monthly	0.250	28%	0.001
Less than Monthly	0.346	41%	0.000
F-statistic for the group is 12.75, probability of the null is 0.000			
*Omitted Variable			

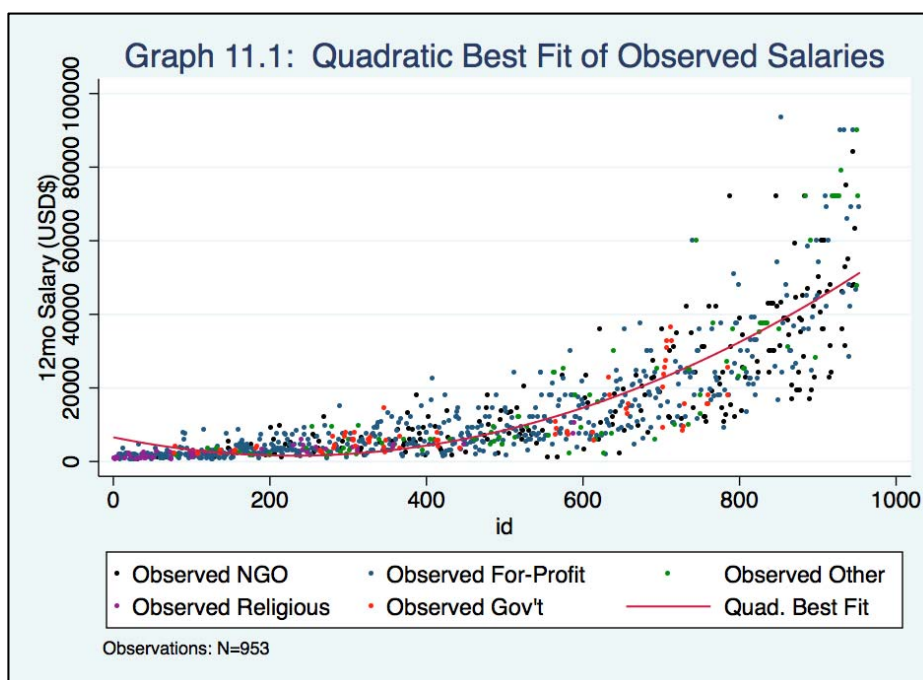
The data appears to suggest that if an employee is hired and must be provided all necessary computer training then she will earn a lower salary. This may make some intuitive sense because extensive computer training equates to higher costs that could be adjusted for through lower salary; however, the point estimate for All Training Provided is not independently statistically significant (p-value of 0.243). The model supports the notion that as an employee requires fewer ongoing costs and/or smaller start-up costs from the organization then she is able to capture more value for herself in the form of salary.

Variable	Coefficient	Exponentiated Value	Probability of the null
None*	0	0%	-
All Provided	-0.128	-12%	0.243
Some Provided	0.178	19%	0.027
Must Possess	0.382	47%	0.000
F-statistic for the group is 12.62, probability of the null is 0.000			
*Omitted Variable			

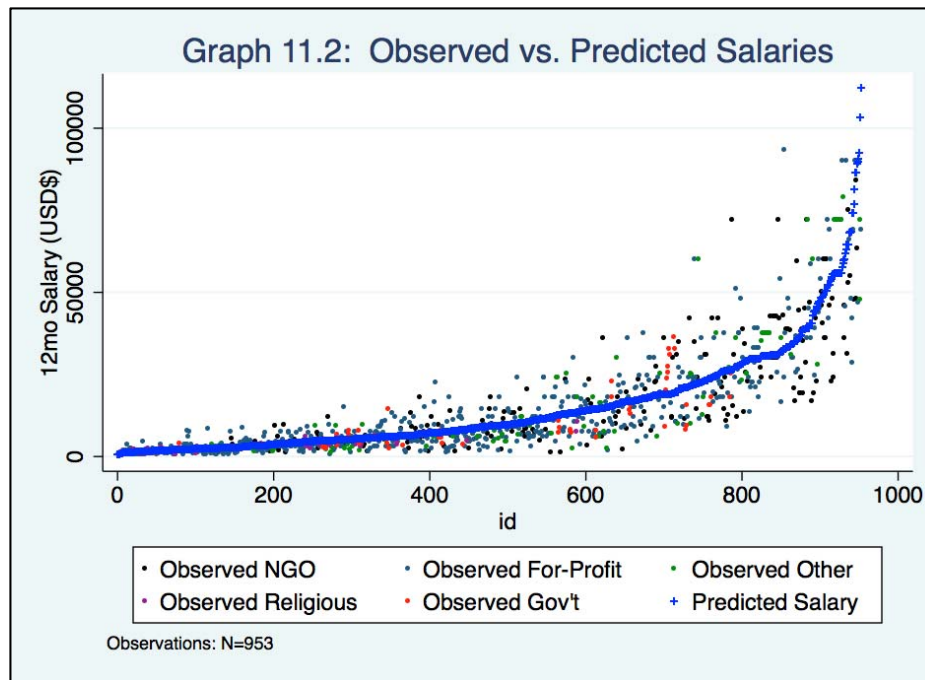
6. RESULTS OF DATA ANALYSIS

The use of a statistical model allows the researchers to speak intelligently to the causal relationship organizational-, position-, and employee-variables have with salaries. As described above, the model is able to quantify these effects and statistically prove a variable's individual significance even in the presence of high variability along multiple dimensions.

Graph 11.1 is another visual representation of salary variability overlaid with a quadratic line of best fit. Recall, however, that there are fifty-eight variables in the model and therefore a line of best fit is far too simplistic because of the multidimensionality underlying each observation. On the other hand, the hedonic regression analysis of the type used by DeMattee and Waddle allows for the robust statistical analysis required.



A virtue intrinsic to mathematical modeling is the ability to receive independent inputs and mathematize them into a dependent output. Using this research as an example, the observed salary can be decoupled from the reported characteristics of each observation and those characteristics can then be used as inputs into the specification to predict a salary. The standard error of each prediction was calculated and added to the estimated salary to arrive at a final predicted salary. Observations were then sorted lowest to highest according to this final predicted salary and given an identification number. Graph 11.2 shows the observed salaries as colored dots overlaid with blue crosses that represent the 953 predicted salaries. Each dot is vertically paired with only one cross using the ID number. As can be seen from the graph, nearly equal amounts of observed salaries are above and below the predicted salaries.



7. CONCLUSION

Using a dataset of 953 observations from 83 organizations with a log-log regression model, we show that: i) the environment in which an organization is headquartered matters because larger city populations increase salaries; ii) the organization itself is an important consideration since factors such as organizational structure, country of origin, and sector of economic activity have all been proven to affect salary; iii) the position and the expectations that come with it with respect to supervision and computer training significantly affect salary; iv) the employee herself can possess certain skills and attributes that increase her earning potential—i.e. increased level of education, increased professional experience, increased English literacy, and being an expat.

These results must be interpreted with caution, however, and for two main reasons. First, this research is a description of how the market was in 2011, and is not a commentary on how it *should be* in 2013 or beyond. As time moves forward the above point estimates will become obsolete. It should be remembered that markets continuously recalibrate themselves towards new equilibrium as new information or shocks to supply and demand occur. An example of the former is this research and an example of the latter is NGOs' completion of emergency projects that may cause them to stop hiring or possibly layoff employees. Second, the data collected are from professional employers in the formal economy and omit salary information on employees of the informal labor market. The value of the data can be maintained, however, if it becomes a piece of a larger observational study focused on the developmental trends of the Haitian labor market.

This research is an attempt to bring new insights on the determinants and differentials of wages on the Haitian labor market. It could be further improved with the participation of non-Haitian government employers such as embassies and the inclusion of local government salary data. It may be also useful to add other data (employment statistics at the city level, cost of living information by city, GDP, levels of remittances and foreign aid, debt forgiveness, etc.), which affect employment and wages.

Sharing our research with organizations and foreign direct investors may help employers better understand labor costs and accelerate investment and employment in Haiti.

REFERENCES

1. Castello Branco, R., 1979. Crescimento Acelerado o Mercado de Trabalho: A Experiência Brasileira. *Editores da Fundação Getúlio Vargas*. Série Teses No. 1, Rio de Janeiro.
2. DeMattee, A. J., 2011. Haitian Salary Drives: Hedonic Wage Regression of the Haitian Labor Market. *Mimeo, Kellogg School of Management, Northwestern University, USA*
3. Dickens, W. and Katz, L., 1986. Inter-Industry Wage Differences and Industry Characteristics. In: K. Lang and J. Leonard, ed. 1987. *Unemployment and the Structure of Labor Markets*. New York: Basil Blackwell, pp. 48-89.
4. Ferreira da Silva, J., 1987. Diferenciação Salarial na Indústria Brasileira. *Editores da Fundação Getúlio Vargas*. Série Teses No. 14, Rio de Janeiro.
5. Groshen, E., 1986. Sources of Wage Dispersion: Does It Matter Where You Work? *Ph.D. Dissertation, Harvard University*.
6. Kumar, P., 1972. Differentials in Wage Rates of Unskilled Labor in Canadian Manufacturing Industries. *Industrial and Labor Relations Review*, Vol. 26 (1), pp. 631-645
7. Krueger, A. and Summers L., 1988. Efficiency Wages and the Inter-Industry Wage Structure. *Econometrica*, Vol. 56 (2), pp. 259-293
8. Macedo, R., 1985. Wage Differentials between State and Private Enterprises in Brasil, *Discussion Paper No. 41, Florida International University*, November.
9. Rapping, L.A., 1967. Monopoly Rents, Wage Rates, and Union Wage Effectiveness. *Quarterly Review of Economics and Business*, Vol. 7 (1), pp. 31-47.
10. Pean, L., 2009. Salaires et crise aux USA et en Haiti. *AlterPresse*, [online] Available at <http://www.alterpresse.org/spip.php?article8410>
11. Souza, P. and Tokman, V., 1978. Distribución del ingreso, pobreza y empleo en areas urbanas. *El Trimestre Económico*, Vol. 45, No. 179(3), pp. 737-766
12. Verella, F. (2009): "De la Chambre des lords à Zorey Bourik », *Le Nouvelliste*, [online] Available at <http://lenouvelliste.com/lenouvelliste/article/71873/De-la-Chambre-des-Lords-aux-Zorey-Bourik.html>

APPENDIX

A. BACKGROUND OF THE HAITIAN ECONOMY

Each year the Department of Information and Statistics (ISHI), of the Ministry of Finance, publishes the report *Les Comptes Economiques* that summarizes the economic activity of the country for the prior year. The report measures the productivity of ten economic sectors, national inflation, and other economic indicators. The report estimated that in 2010 two sectors—Agriculture, Horticulture, & Fisheries, and Restaurants & Hotels—were responsible for 52% of the country's economic output.

The World Factbook¹¹, which has detailed information on the Haitian economy and provides a thorough overview of the country's current economic condition.

- Haiti's GDP is growing. The economy has rebounded since the January 2010, earthquake razed the capital of Port-au-Prince. In 2010, the economy contracted by an estimated 5.1% and in 2011, grew by 6.1% to an estimated GDP of \$12.4B making it the 145th largest of the 226 economies tracked in the publication. Three economic sectors—services, agriculture, industry—contribute 59%, 25%, and 16%, respectively, to GDP.
- Poverty and unemployment are two issues that plague the population. Approximately 80% of the population lives below the poverty line, 54% in abject poverty. Two-thirds of all Haitians depend on the agricultural sector and its small-scale subsistence farming for survival. There is widespread unemployment and underemployment with approximately 60% of the workforce is employed, ranking it 186th in the world. The balance of the workforce is described as one-part *unemployed* and two-parts *inactive*.
- Waxing national debt and reliance on significant international assistance remain issues for Haiti. In 2009, Haiti received debt forgiveness for over \$1B in money owed. In early 2010, after the earthquake, donor countries canceled the remainder of its outstanding external debt. Its debt has since risen to approximately \$0.5B by the end of 2011. The Haitian government relies on significant international assistance with over half of its annual budget coming from outside sources.
- Haiti is a net-importer of goods and services. Remittances are the primary source of foreign exchange equaling nearly 20% (\$2.5B) of GDP. The country has tariff-free access to the USA, which receives 90% of its exports of \$0.69B total exports and ranks Haiti the 163rd largest exporter in the world. Canada and France receive 4% and 2% of exports, respectively. The major exported commodities are apparel (75%), manufactured goods, oils, cocoa, mangoes, and coffee. The country imports \$3.3B, which is almost five times the value it exports, making it the world's 144th largest importer. The country's major imports are manufactured goods, machinery and transport equipment, fuels, and raw materials.

¹¹ Central Intelligence Agency. "The World Factbook." 2012. The report is available at <https://www.cia.gov/library/publications/the-world-factbook/geos/ha.html>.

B. WAGES ESTIMATES BY SECTOR AND POSITION

PREDICTED SALARY ESTIMATES - by Sector of Economic Activity and Position (NGO Organizational Structure Type Only)

The below table uses a statistical model to estimate salaries for all positions in all sectors while assuming an organizational structure type of, NGO. The reader can choose characteristics--i.e. Position (along the horizontal) and Economic Sector (along the vertical)--to specify of the salary query. All other salary drivers are calculated using the average among the 953 observations. E.g., for an NGO organization operating in the Banking Sector, the estimated salary offered to the Accountant position is \$23,329; the salary paid to the Mechanic position employed in the Manufacturing sector is \$6,586.

	Sector of Economic Activity																						
	Accountant	Cleaning Crew	Cook	Doctor	Driver	Engineer	Executive	Handyman	IT Prof.	Laborer	Mechanic	Messenger	Office Staff	Program Mgr.	Security Guard	Senior Mgr.	Teacher	Wait Staff					
Agriculture	\$ 29,315	\$ 5,163	\$ 6,886	\$ 75,907	\$ 11,069	\$ 23,789	\$ 65,195	\$ 7,875	\$ 28,478	\$ 6,953	\$ 18,210	\$ 7,495	\$ 15,605	\$ 22,625	\$ 33,615	\$ 13,847	\$ 55,687	\$ 15,811	\$ 5,462	\$ 45,813	\$ 10,643	\$ 6,946	
Airlines	\$ 11,682	\$ 2,058	\$ 2,744	\$ 30,249	\$ 4,411	\$ 9,480	\$ 25,980	\$ 3,138	\$ 11,348	\$ 2,771	\$ 7,257	\$ 2,987	\$ 6,219	\$ 9,016	\$ 13,396	\$ 5,518	\$ 22,191	\$ 6,301	\$ 2,177	\$ 18,256	\$ 4,241	\$ 2,768	\$ 2,768
Banking	\$ 23,329	\$ 4,109	\$ 5,480	\$ 60,408	\$ 8,809	\$ 18,932	\$ 51,883	\$ 6,267	\$ 22,663	\$ 5,533	\$ 14,491	\$ 5,965	\$ 12,419	\$ 18,006	\$ 26,752	\$ 11,019	\$ 44,316	\$ 12,583	\$ 4,347	\$ 36,458	\$ 8,470	\$ 5,528	\$ 5,528
Construction	\$ 16,593	\$ 2,923	\$ 3,898	\$ 42,964	\$ 6,265	\$ 13,465	\$ 36,901	\$ 4,457	\$ 16,119	\$ 3,936	\$ 10,307	\$ 4,242	\$ 8,833	\$ 12,806	\$ 19,027	\$ 7,838	\$ 31,520	\$ 8,949	\$ 3,091	\$ 25,931	\$ 6,024	\$ 3,931	\$ 3,931
Education	\$ 10,415	\$ 1,834	\$ 2,447	\$ 26,968	\$ 3,933	\$ 8,452	\$ 23,162	\$ 2,798	\$ 10,117	\$ 2,470	\$ 6,469	\$ 2,663	\$ 5,544	\$ 8,038	\$ 11,943	\$ 4,919	\$ 19,784	\$ 5,617	\$ 1,940	\$ 16,276	\$ 3,781	\$ 2,468	\$ 2,468
Gasoline	\$ 24,436	\$ 4,304	\$ 5,740	\$ 63,274	\$ 9,227	\$ 19,830	\$ 54,345	\$ 6,564	\$ 23,738	\$ 5,796	\$ 15,179	\$ 6,248	\$ 13,008	\$ 18,860	\$ 28,021	\$ 11,542	\$ 46,419	\$ 13,180	\$ 4,553	\$ 38,188	\$ 8,871	\$ 5,790	\$ 5,790
Hotels & Lodging	\$ 10,937	\$ 1,926	\$ 2,569	\$ 28,319	\$ 4,130	\$ 8,875	\$ 24,323	\$ 2,938	\$ 10,624	\$ 2,594	\$ 6,794	\$ 2,796	\$ 5,822	\$ 8,441	\$ 12,541	\$ 5,166	\$ 20,776	\$ 5,899	\$ 2,038	\$ 17,092	\$ 3,971	\$ 2,591	\$ 2,591
Humanitarian	\$ 12,355	\$ 2,176	\$ 2,902	\$ 31,990	\$ 4,665	\$ 10,026	\$ 27,477	\$ 3,319	\$ 12,002	\$ 2,930	\$ 6,469	\$ 3,159	\$ 6,577	\$ 9,535	\$ 14,167	\$ 5,836	\$ 23,469	\$ 6,663	\$ 2,302	\$ 19,307	\$ 4,485	\$ 2,927	\$ 2,927
Int'l Development	\$ 11,186	\$ 1,970	\$ 2,628	\$ 28,964	\$ 4,224	\$ 9,077	\$ 24,877	\$ 3,005	\$ 10,866	\$ 2,653	\$ 6,948	\$ 2,860	\$ 5,954	\$ 8,633	\$ 12,827	\$ 5,282	\$ 21,249	\$ 6,033	\$ 2,084	\$ 17,481	\$ 4,061	\$ 2,650	\$ 2,650
Medical	\$ 11,584	\$ 2,040	\$ 2,721	\$ 29,995	\$ 4,374	\$ 9,400	\$ 25,762	\$ 3,112	\$ 11,253	\$ 2,748	\$ 7,196	\$ 11,584	\$ 2,040	\$ 2,721	\$ 29,995	\$ 4,374	\$ 9,400	\$ 25,762	\$ 3,112	\$ 11,253	\$ 2,748	\$ 7,196	\$ 7,196
Manufacturing	\$ 10,602	\$ 1,867	\$ 2,491	\$ 27,453	\$ 4,003	\$ 8,604	\$ 23,579	\$ 2,848	\$ 10,299	\$ 2,515	\$ 6,586	\$ 10,602	\$ 1,867	\$ 2,491	\$ 27,453	\$ 4,003	\$ 8,604	\$ 23,579	\$ 2,848	\$ 10,299	\$ 2,515	\$ 6,586	\$ 6,586
Orphanage	\$ 4,612	\$ 812	\$ 1,083	\$ 11,941	\$ 1,741	\$ 3,742	\$ 10,256	\$ 1,239	\$ 4,480	\$ 1,094	\$ 2,865	\$ 4,612	\$ 812	\$ 1,083	\$ 11,941	\$ 1,741	\$ 3,742	\$ 10,256	\$ 1,239	\$ 4,480	\$ 1,094	\$ 2,865	\$ 2,865
Other	\$ 14,053	\$ 2,475	\$ 3,301	\$ 36,387	\$ 5,306	\$ 11,404	\$ 31,252	\$ 3,775	\$ 13,651	\$ 3,333	\$ 8,729	\$ 14,053	\$ 2,475	\$ 3,301	\$ 36,387	\$ 5,306	\$ 11,404	\$ 31,252	\$ 3,775	\$ 13,651	\$ 3,333	\$ 8,729	\$ 8,729
Retail	\$ 16,092	\$ 2,834	\$ 3,780	\$ 41,667	\$ 6,076	\$ 13,059	\$ 35,787	\$ 4,323	\$ 15,632	\$ 3,817	\$ 9,996	\$ 16,092	\$ 2,834	\$ 3,780	\$ 41,667	\$ 6,076	\$ 13,059	\$ 35,787	\$ 4,323	\$ 15,632	\$ 3,817	\$ 9,996	\$ 9,996
Service	\$ 13,950	\$ 2,457	\$ 3,277	\$ 36,121	\$ 5,267	\$ 11,320	\$ 31,024	\$ 3,747	\$ 13,551	\$ 3,309	\$ 8,665	\$ 13,950	\$ 2,457	\$ 3,277	\$ 36,121	\$ 5,267	\$ 11,320	\$ 31,024	\$ 3,747	\$ 13,551	\$ 3,309	\$ 8,665	\$ 8,665
Telecomm.	\$ 20,862	\$ 3,675	\$ 4,901	\$ 54,019	\$ 7,877	\$ 16,930	\$ 46,396	\$ 5,604	\$ 20,266	\$ 4,948	\$ 12,959	\$ 20,862	\$ 3,675	\$ 4,901	\$ 54,019	\$ 7,877	\$ 16,930	\$ 46,396	\$ 5,604	\$ 20,266	\$ 4,948	\$ 12,959	\$ 12,959
	Sector of Economic Activity																						
	Messenger	Office Staff	Nurse	Office Mgr.	Other	Program Mgr.	Secretary	Security Guard	Senior Mgr.	Teacher	Wait Staff	Messenger	Office Staff	Nurse	Office Mgr.	Other	Program Mgr.	Secretary	Security Guard	Senior Mgr.	Teacher	Wait Staff	
Agriculture	\$ 7,495	\$ 15,605	\$ 22,625	\$ 33,615	\$ 13,847	\$ 55,687	\$ 15,811	\$ 5,462	\$ 45,813	\$ 10,643	\$ 6,946	\$ 7,495	\$ 15,605	\$ 22,625	\$ 33,615	\$ 13,847	\$ 55,687	\$ 15,811	\$ 5,462	\$ 45,813	\$ 10,643	\$ 6,946	\$ 6,946
Airlines	\$ 2,987	\$ 6,219	\$ 9,016	\$ 13,396	\$ 5,518	\$ 22,191	\$ 6,301	\$ 2,177	\$ 18,256	\$ 4,241	\$ 2,768	\$ 2,987	\$ 6,219	\$ 9,016	\$ 13,396	\$ 5,518	\$ 22,191	\$ 6,301	\$ 2,177	\$ 18,256	\$ 4,241	\$ 2,768	\$ 2,768
Banking	\$ 5,965	\$ 12,419	\$ 18,006	\$ 26,752	\$ 11,019	\$ 44,316	\$ 12,583	\$ 4,347	\$ 36,458	\$ 8,470	\$ 5,528	\$ 5,965	\$ 12,419	\$ 18,006	\$ 26,752	\$ 11,019	\$ 44,316	\$ 12,583	\$ 4,347	\$ 36,458	\$ 8,470	\$ 5,528	\$ 5,528
Construction	\$ 4,242	\$ 8,833	\$ 12,806	\$ 19,027	\$ 7,838	\$ 31,520	\$ 8,949	\$ 3,091	\$ 25,931	\$ 6,024	\$ 3,931	\$ 4,242	\$ 8,833	\$ 12,806	\$ 19,027	\$ 7,838	\$ 31,520	\$ 8,949	\$ 3,091	\$ 25,931	\$ 6,024	\$ 3,931	\$ 3,931
Education	\$ 2,663	\$ 5,544	\$ 8,038	\$ 11,943	\$ 4,919	\$ 19,784	\$ 5,617	\$ 1,940	\$ 16,276	\$ 3,781	\$ 2,468	\$ 2,663	\$ 5,544	\$ 8,038	\$ 11,943	\$ 4,919	\$ 19,784	\$ 5,617	\$ 1,940	\$ 16,276	\$ 3,781	\$ 2,468	\$ 2,468
Gasoline	\$ 6,248	\$ 13,008	\$ 18,860	\$ 28,021	\$ 11,542	\$ 46,419	\$ 13,180	\$ 4,553	\$ 38,188	\$ 8,871	\$ 5,790	\$ 6,248	\$ 13,008	\$ 18,860	\$ 28,021	\$ 11,542	\$ 46,419	\$ 13,180	\$ 4,553	\$ 38,188	\$ 8,871	\$ 5,790	\$ 5,790
Hotels & Lodging	\$ 2,796	\$ 5,822	\$ 8,441	\$ 12,541	\$ 5,166	\$ 20,776	\$ 5,899	\$ 2,038	\$ 17,092	\$ 3,971	\$ 2,591	\$ 2,796	\$ 5,822	\$ 8,441	\$ 12,541	\$ 5,166	\$ 20,776	\$ 5,899	\$ 2,038	\$ 17,092	\$ 3,971	\$ 2,591	\$ 2,591
Humanitarian	\$ 3,159	\$ 6,577	\$ 9,535	\$ 14,167	\$ 5,836	\$ 23,469	\$ 6,663	\$ 2,302	\$ 19,307	\$ 4,485	\$ 2,927	\$ 3,159	\$ 6,577	\$ 9,535	\$ 14,167	\$ 5,836	\$ 23,469	\$ 6,663	\$ 2,302	\$ 19,307	\$ 4,485	\$ 2,927	\$ 2,927
Int'l Development	\$ 2,860	\$ 5,954	\$ 8,633	\$ 12,827	\$ 5,282	\$ 21,249	\$ 6,033	\$ 2,084	\$ 17,481	\$ 4,061	\$ 2,650	\$ 2,860	\$ 5,954	\$ 8,633	\$ 12,827	\$ 5,282	\$ 21,249	\$ 6,033	\$ 2,084	\$ 17,481	\$ 4,061	\$ 2,650	\$ 2,650
Medical	\$ 2,962	\$ 6,166	\$ 8,941	\$ 13,283	\$ 5,472	\$ 22,005	\$ 6,248	\$ 2,158	\$ 18,103	\$ 4,205	\$ 2,745	\$ 2,962	\$ 6,166	\$ 8,941	\$ 13,283	\$ 5,472	\$ 22,005	\$ 6,248	\$ 2,158	\$ 18,103	\$ 4,205	\$ 2,745	\$ 2,745
Manufacturing	\$ 2,711	\$ 5,644	\$ 8,183	\$ 12,157	\$ 5,008	\$ 20,140	\$ 5,718	\$ 1,975	\$ 16,569	\$ 3,849	\$ 2,512	\$ 2,711	\$ 5,644	\$ 8,183	\$ 12,157	\$ 5,008	\$ 20,140	\$ 5,718	\$ 1,975	\$ 16,569	\$ 3,849	\$ 2,512	\$ 2,512
Orphanage	\$ 1,179	\$ 2,455	\$ 3,559	\$ 5,288	\$ 2,178	\$ 8,761	\$ 2,487	\$ 859	\$ 7,207	\$ 1,674	\$ 1,093	\$ 1,179	\$ 2,455	\$ 3,559	\$ 5,288	\$ 2,178	\$ 8,761	\$ 2,487	\$ 859	\$ 7,207	\$ 1,674	\$ 1,093	\$ 1,093
Other	\$ 3,593	\$ 7,480	\$ 10,846	\$ 16,114	\$ 6,638	\$ 26,694	\$ 7,579	\$ 2,618	\$ 21,961	\$ 5,102	\$ 3,330	\$ 3,593	\$ 7,480	\$ 10,846	\$ 16,114	\$ 6,638	\$ 26,694	\$ 7,579	\$ 2,618	\$ 21,961	\$ 5,102	\$ 3,330	\$ 3,330
Retail	\$ 4,114	\$ 8,566	\$ 12,420	\$ 18,452	\$ 7,601	\$ 30,568	\$ 8,679	\$ 2,998	\$ 25,148	\$ 5,842	\$ 3,813	\$ 4,114	\$ 8,566	\$ 12,420	\$ 18,452	\$ 7,601	\$ 30,568	\$ 8,679	\$ 2,998	\$ 25,148	\$ 5,842	\$ 3,813	\$ 3,813
Service	\$ 3,567	\$ 7,426	\$ 10,767	\$ 15,996	\$ 6,589	\$ 26,499	\$ 7,524	\$ 2,599	\$ 21,800	\$ 5,064	\$ 3,305	\$ 3,567	\$ 7,426	\$ 10,767	\$ 15,996	\$ 6,589	\$ 26,499	\$ 7,524	\$ 2,599	\$ 21,800	\$ 5,064	\$ 3,305	\$ 3,305
Telecomm.	\$ 5,334	\$ 11,105	\$ 16,101	\$ 23,922	\$ 9,854	\$ 39,629	\$ 11,252	\$ 3,887	\$ 32,602	\$ 7,574	\$ 4,943	\$ 5,334	\$ 11,105	\$ 16,101	\$ 23,922	\$ 9,854	\$ 39,629	\$ 11,252	\$ 3,887	\$ 32,602	\$ 7,574	\$ 4,943	\$ 4,943

PREDICTED SALARY ESTIMATES - by Sector of Economic Activity and Position (For-Profit Organizational Structure Type Only)

The below table uses a statistical model to estimate salaries for all positions in all sectors while assuming an organizational structure type of, For-Profit. The reader can choose characteristics--i.e. Position (along the horizontal) and Economic Sector (along the vertical)--to specify of the salary query. All other salary drivers are calculated using the average among the 953 observations. E.g., for a For-Profit organization operating in the Banking Sector, the estimated salary offered to the Accountant position is \$18,959; the salary paid to the Mechanic position employed in the Manufacturing sector is \$5,352.

	Accountant	Cleaning Crew	Cook	Doctor	Driver	Engineer	Executive	Handyman	IT Prof.	Laborer	Mechanic	
Sector of Economic Activity	Agriculture	\$ 23,824	\$ 4,196	\$ 5,596	\$ 61,688	\$ 8,995	\$ 19,333	\$ 52,983	\$ 6,400	\$ 23,143	\$ 5,651	\$ 14,799
	Airlines	\$ 9,494	\$ 1,672	\$ 2,230	\$ 24,582	\$ 3,585	\$ 7,704	\$ 21,113	\$ 2,550	\$ 9,223	\$ 2,252	\$ 5,897
	Banking	\$ 18,959	\$ 3,339	\$ 4,454	\$ 49,092	\$ 7,159	\$ 15,385	\$ 42,164	\$ 5,093	\$ 18,418	\$ 4,497	\$ 11,777
	Construction	\$ 13,485	\$ 2,375	\$ 3,168	\$ 34,916	\$ 5,092	\$ 10,943	\$ 29,989	\$ 3,622	\$ 13,099	\$ 3,198	\$ 8,376
	Education	\$ 8,464	\$ 1,491	\$ 1,988	\$ 21,916	\$ 3,196	\$ 6,868	\$ 18,823	\$ 2,274	\$ 8,222	\$ 2,008	\$ 5,258
	Gasoline	\$ 19,859	\$ 3,498	\$ 4,665	\$ 51,421	\$ 7,498	\$ 16,115	\$ 44,165	\$ 5,335	\$ 19,291	\$ 4,710	\$ 12,336
	Hotels & Lodging	\$ 8,888	\$ 1,566	\$ 2,088	\$ 23,014	\$ 3,356	\$ 7,213	\$ 19,767	\$ 2,388	\$ 8,634	\$ 2,108	\$ 5,521
	Humanitarian	\$ 10,040	\$ 1,768	\$ 2,359	\$ 25,998	\$ 3,791	\$ 8,148	\$ 22,329	\$ 2,697	\$ 9,753	\$ 2,381	\$ 6,237
	Int'l Development	\$ 9,090	\$ 1,601	\$ 2,135	\$ 23,538	\$ 3,432	\$ 7,377	\$ 20,217	\$ 2,442	\$ 8,831	\$ 2,156	\$ 5,647
	Medical	\$ 9,414	\$ 1,658	\$ 2,211	\$ 24,376	\$ 3,555	\$ 7,639	\$ 20,936	\$ 2,529	\$ 9,145	\$ 2,233	\$ 5,848
	Manufacturing	\$ 8,616	\$ 1,518	\$ 2,024	\$ 22,310	\$ 3,253	\$ 6,992	\$ 19,162	\$ 2,315	\$ 8,370	\$ 2,044	\$ 5,352
	Orphanage	\$ 3,748	\$ 660	\$ 880	\$ 9,705	\$ 1,415	\$ 3,041	\$ 8,335	\$ 1,007	\$ 3,641	\$ 889	\$ 2,328
	Other	\$ 11,420	\$ 2,012	\$ 2,683	\$ 29,571	\$ 4,312	\$ 9,267	\$ 25,398	\$ 3,068	\$ 11,094	\$ 2,709	\$ 7,094
	Retail	\$ 13,077	\$ 2,303	\$ 3,072	\$ 33,862	\$ 4,938	\$ 10,612	\$ 29,084	\$ 3,513	\$ 12,704	\$ 3,102	\$ 8,123
	Service	\$ 11,337	\$ 1,997	\$ 2,663	\$ 29,355	\$ 4,281	\$ 9,200	\$ 25,212	\$ 3,045	\$ 11,013	\$ 2,689	\$ 7,042
Telecomm.	\$ 16,954	\$ 2,986	\$ 3,983	\$ 43,900	\$ 6,402	\$ 13,758	\$ 37,705	\$ 4,554	\$ 16,470	\$ 4,021	\$ 10,531	
	Messenger	Office Staff	Nurse	Office Mgr.	Other	Program Mgr.	Secretary	Security Guard	Senior Mgr.	Teacher	Wait Staff	
Sector of Economic Activity	Agriculture	\$ 6,091	\$ 12,682	\$ 18,387	\$ 27,318	\$ 11,253	\$ 45,255	\$ 12,849	\$ 4,439	\$ 37,231	\$ 8,649	\$ 5,645
	Airlines	\$ 2,427	\$ 5,054	\$ 7,327	\$ 10,886	\$ 4,484	\$ 18,034	\$ 5,120	\$ 1,769	\$ 14,836	\$ 3,447	\$ 2,249
	Banking	\$ 4,847	\$ 10,092	\$ 14,633	\$ 21,740	\$ 8,955	\$ 36,015	\$ 10,226	\$ 3,532	\$ 29,629	\$ 6,883	\$ 4,492
	Construction	\$ 3,448	\$ 7,178	\$ 10,407	\$ 15,463	\$ 6,369	\$ 25,615	\$ 7,273	\$ 2,512	\$ 21,073	\$ 4,895	\$ 3,195
	Education	\$ 2,164	\$ 4,505	\$ 6,532	\$ 9,706	\$ 3,998	\$ 16,078	\$ 4,565	\$ 1,577	\$ 13,227	\$ 3,073	\$ 2,005
	Gasoline	\$ 5,077	\$ 10,571	\$ 15,327	\$ 22,772	\$ 9,380	\$ 37,724	\$ 10,711	\$ 3,700	\$ 31,035	\$ 7,210	\$ 4,705
	Hotels & Lodging	\$ 2,272	\$ 4,731	\$ 6,860	\$ 10,192	\$ 4,198	\$ 16,884	\$ 4,794	\$ 1,656	\$ 13,890	\$ 3,227	\$ 2,106
	Humanitarian	\$ 2,567	\$ 5,345	\$ 7,749	\$ 11,513	\$ 4,742	\$ 19,072	\$ 5,415	\$ 1,871	\$ 15,690	\$ 3,645	\$ 2,379
	Int'l Development	\$ 2,324	\$ 4,839	\$ 7,016	\$ 10,424	\$ 4,294	\$ 17,268	\$ 4,903	\$ 1,694	\$ 14,206	\$ 3,300	\$ 2,154
	Medical	\$ 2,407	\$ 5,011	\$ 7,266	\$ 10,795	\$ 4,447	\$ 17,883	\$ 5,078	\$ 1,754	\$ 14,712	\$ 3,418	\$ 2,251
	Manufacturing	\$ 2,203	\$ 4,586	\$ 6,650	\$ 9,880	\$ 4,070	\$ 16,367	\$ 4,647	\$ 1,605	\$ 13,465	\$ 3,128	\$ 2,041
	Orphanage	\$ 958	\$ 1,995	\$ 2,893	\$ 4,298	\$ 1,770	\$ 7,119	\$ 2,021	\$ 698	\$ 5,857	\$ 1,361	\$ 888
	Other	\$ 2,920	\$ 6,079	\$ 8,814	\$ 13,095	\$ 5,394	\$ 21,694	\$ 6,160	\$ 2,128	\$ 17,847	\$ 4,146	\$ 2,706
	Retail	\$ 3,344	\$ 6,961	\$ 10,093	\$ 14,996	\$ 6,177	\$ 24,842	\$ 7,053	\$ 2,437	\$ 20,437	\$ 4,748	\$ 3,099
	Service	\$ 2,899	\$ 6,035	\$ 8,750	\$ 13,000	\$ 5,355	\$ 21,535	\$ 6,115	\$ 2,112	\$ 17,717	\$ 4,116	\$ 2,686
Telecomm.	\$ 4,335	\$ 9,025	\$ 13,085	\$ 19,441	\$ 8,008	\$ 32,206	\$ 9,144	\$ 3,159	\$ 26,495	\$ 6,155	\$ 4,017	

PREDICTED SALARY ESTIMATES - by Sector of Economic Activity and Position (Other Organizational Structure Type Only)

The below table uses a statistical model to estimate salaries for all positions in all sectors while assuming an organizational structure type of Other. The reader can choose characteristics--i.e. Position (along the horizontal) and Economic Sector (along the vertical)--to specify of the salary query. All other salary drivers are calculated using the average among the 953 observations. E.g., for a Other organization operating in the Banking Sector, the estimated salary offered to the Accountant position is \$17,019; the salary paid to the Mechanic position employed in the Manufacturing sector is \$4,804.

	Accountant	Cleaning Crew	Cook	Doctor	Driver	Engineer	Executive	Handyman	IT Prof.	Laborer	Mechanic
Agriculture	\$ 21,386	\$ 3,767	\$ 5,024	\$ 55,375	\$ 8,075	\$ 17,355	\$ 47,561	\$ 5,745	\$ 20,775	\$ 5,072	\$ 13,284
Airlines	\$ 8,522	\$ 1,501	\$ 2,002	\$ 22,067	\$ 3,218	\$ 6,916	\$ 18,953	\$ 2,289	\$ 8,279	\$ 2,021	\$ 5,294
Banking	\$ 17,019	\$ 2,998	\$ 3,998	\$ 44,068	\$ 6,426	\$ 13,811	\$ 37,849	\$ 4,572	\$ 16,533	\$ 4,037	\$ 10,572
Construction	\$ 12,105	\$ 2,132	\$ 2,843	\$ 31,343	\$ 4,571	\$ 9,823	\$ 26,920	\$ 3,252	\$ 11,759	\$ 2,871	\$ 7,519
Education	\$ 7,598	\$ 1,338	\$ 1,785	\$ 19,673	\$ 2,869	\$ 6,166	\$ 16,897	\$ 2,041	\$ 7,381	\$ 1,802	\$ 4,720
Gasoline	\$ 17,827	\$ 3,140	\$ 4,188	\$ 46,159	\$ 6,731	\$ 14,466	\$ 39,645	\$ 4,789	\$ 17,317	\$ 4,228	\$ 11,073
Hotels & Lodging	\$ 7,979	\$ 1,405	\$ 1,874	\$ 20,659	\$ 3,013	\$ 6,475	\$ 17,744	\$ 2,143	\$ 7,751	\$ 1,892	\$ 4,956
Humanitarian	\$ 9,013	\$ 1,587	\$ 2,117	\$ 23,337	\$ 3,403	\$ 7,314	\$ 20,044	\$ 2,421	\$ 8,755	\$ 2,138	\$ 5,598
Int'l Development	\$ 8,160	\$ 1,437	\$ 1,917	\$ 21,130	\$ 3,081	\$ 6,622	\$ 18,148	\$ 2,192	\$ 7,927	\$ 1,936	\$ 5,069
Medical	\$ 8,451	\$ 1,488	\$ 1,985	\$ 21,882	\$ 3,191	\$ 6,858	\$ 18,794	\$ 2,270	\$ 8,209	\$ 2,004	\$ 5,249
Manufacturing	\$ 7,734	\$ 1,362	\$ 1,817	\$ 20,027	\$ 2,920	\$ 6,276	\$ 17,201	\$ 2,078	\$ 7,513	\$ 1,835	\$ 4,804
Orphanage	\$ 3,364	\$ 593	\$ 790	\$ 8,711	\$ 1,270	\$ 2,730	\$ 7,482	\$ 904	\$ 3,268	\$ 798	\$ 2,090
Other	\$ 10,252	\$ 1,806	\$ 2,408	\$ 26,545	\$ 3,871	\$ 8,319	\$ 22,799	\$ 2,754	\$ 9,959	\$ 2,432	\$ 6,368
Retail	\$ 11,739	\$ 2,068	\$ 2,758	\$ 30,397	\$ 4,433	\$ 9,526	\$ 26,107	\$ 3,154	\$ 11,404	\$ 2,784	\$ 7,292
Service	\$ 10,177	\$ 1,792	\$ 2,391	\$ 26,351	\$ 3,843	\$ 8,258	\$ 22,632	\$ 2,734	\$ 9,886	\$ 2,414	\$ 6,321
Telecomm.	\$ 15,219	\$ 2,681	\$ 3,575	\$ 39,408	\$ 5,746	\$ 12,350	\$ 33,847	\$ 4,088	\$ 14,784	\$ 3,610	\$ 9,454
	Messenger	Office Staff	Nurse	Office Mgr.	Other	Program Mgr.	Secretary	Security Guard	Senior Mgr.	Teacher	Wait Staff
Agriculture	\$ 5,468	\$ 11,384	\$ 16,506	\$ 24,523	\$ 10,101	\$ 40,624	\$ 11,535	\$ 3,985	\$ 33,421	\$ 7,764	\$ 5,067
Airlines	\$ 2,179	\$ 4,537	\$ 6,577	\$ 9,772	\$ 4,025	\$ 16,189	\$ 4,597	\$ 1,588	\$ 13,318	\$ 3,094	\$ 2,019
Banking	\$ 4,351	\$ 9,060	\$ 13,135	\$ 19,516	\$ 8,039	\$ 32,329	\$ 9,179	\$ 3,171	\$ 26,597	\$ 6,179	\$ 4,032
Construction	\$ 3,095	\$ 6,444	\$ 9,342	\$ 13,880	\$ 5,718	\$ 22,994	\$ 6,529	\$ 2,255	\$ 18,917	\$ 4,395	\$ 2,868
Education	\$ 1,943	\$ 4,044	\$ 5,864	\$ 8,712	\$ 3,589	\$ 14,433	\$ 4,098	\$ 1,416	\$ 11,874	\$ 2,758	\$ 1,800
Gasoline	\$ 4,558	\$ 9,489	\$ 13,759	\$ 20,442	\$ 8,420	\$ 33,863	\$ 9,615	\$ 3,321	\$ 27,859	\$ 6,472	\$ 4,224
Hotels & Lodging	\$ 2,040	\$ 4,247	\$ 6,158	\$ 9,149	\$ 3,769	\$ 15,156	\$ 4,303	\$ 1,487	\$ 12,469	\$ 2,897	\$ 1,890
Humanitarian	\$ 2,304	\$ 4,798	\$ 6,956	\$ 10,335	\$ 4,257	\$ 17,121	\$ 4,861	\$ 1,679	\$ 14,085	\$ 3,272	\$ 2,135
Int'l Development	\$ 2,086	\$ 4,344	\$ 6,298	\$ 9,357	\$ 3,854	\$ 15,501	\$ 4,401	\$ 1,520	\$ 12,752	\$ 2,962	\$ 1,933
Medical	\$ 2,161	\$ 4,498	\$ 6,522	\$ 9,690	\$ 3,992	\$ 16,053	\$ 4,558	\$ 1,575	\$ 13,206	\$ 3,068	\$ 2,002
Manufacturing	\$ 1,978	\$ 4,117	\$ 5,969	\$ 8,869	\$ 3,653	\$ 14,692	\$ 4,172	\$ 1,441	\$ 12,087	\$ 2,808	\$ 1,833
Orphanage	\$ 860	\$ 1,791	\$ 2,597	\$ 3,858	\$ 1,589	\$ 6,391	\$ 1,815	\$ 627	\$ 5,258	\$ 1,221	\$ 797
Other	\$ 2,621	\$ 5,457	\$ 7,912	\$ 11,755	\$ 4,842	\$ 19,474	\$ 5,529	\$ 1,910	\$ 16,021	\$ 3,722	\$ 2,429
Retail	\$ 3,001	\$ 6,249	\$ 9,060	\$ 13,461	\$ 5,545	\$ 22,300	\$ 6,332	\$ 2,187	\$ 18,346	\$ 4,262	\$ 2,781
Service	\$ 2,602	\$ 5,417	\$ 7,854	\$ 11,669	\$ 4,807	\$ 19,332	\$ 5,489	\$ 1,896	\$ 15,904	\$ 3,695	\$ 2,411
Telecomm.	\$ 3,891	\$ 8,101	\$ 11,746	\$ 17,452	\$ 7,189	\$ 28,910	\$ 8,209	\$ 2,836	\$ 23,784	\$ 5,525	\$ 3,606
	Messenger	Office Staff	Nurse	Office Mgr.	Other	Program Mgr.	Secretary	Security Guard	Senior Mgr.	Teacher	Wait Staff
Agriculture	\$ 5,468	\$ 11,384	\$ 16,506	\$ 24,523	\$ 10,101	\$ 40,624	\$ 11,535	\$ 3,985	\$ 33,421	\$ 7,764	\$ 5,067
Airlines	\$ 2,179	\$ 4,537	\$ 6,577	\$ 9,772	\$ 4,025	\$ 16,189	\$ 4,597	\$ 1,588	\$ 13,318	\$ 3,094	\$ 2,019
Banking	\$ 4,351	\$ 9,060	\$ 13,135	\$ 19,516	\$ 8,039	\$ 32,329	\$ 9,179	\$ 3,171	\$ 26,597	\$ 6,179	\$ 4,032
Construction	\$ 3,095	\$ 6,444	\$ 9,342	\$ 13,880	\$ 5,718	\$ 22,994	\$ 6,529	\$ 2,255	\$ 18,917	\$ 4,395	\$ 2,868
Education	\$ 1,943	\$ 4,044	\$ 5,864	\$ 8,712	\$ 3,589	\$ 14,433	\$ 4,098	\$ 1,416	\$ 11,874	\$ 2,758	\$ 1,800
Gasoline	\$ 4,558	\$ 9,489	\$ 13,759	\$ 20,442	\$ 8,420	\$ 33,863	\$ 9,615	\$ 3,321	\$ 27,859	\$ 6,472	\$ 4,224
Hotels & Lodging	\$ 2,040	\$ 4,247	\$ 6,158	\$ 9,149	\$ 3,769	\$ 15,156	\$ 4,303	\$ 1,487	\$ 12,469	\$ 2,897	\$ 1,890
Humanitarian	\$ 2,304	\$ 4,798	\$ 6,956	\$ 10,335	\$ 4,257	\$ 17,121	\$ 4,861	\$ 1,679	\$ 14,085	\$ 3,272	\$ 2,135
Int'l Development	\$ 2,086	\$ 4,344	\$ 6,298	\$ 9,357	\$ 3,854	\$ 15,501	\$ 4,401	\$ 1,520	\$ 12,752	\$ 2,962	\$ 1,933
Medical	\$ 2,161	\$ 4,498	\$ 6,522	\$ 9,690	\$ 3,992	\$ 16,053	\$ 4,558	\$ 1,575	\$ 13,206	\$ 3,068	\$ 2,002
Manufacturing	\$ 1,978	\$ 4,117	\$ 5,969	\$ 8,869	\$ 3,653	\$ 14,692	\$ 4,172	\$ 1,441	\$ 12,087	\$ 2,808	\$ 1,833
Orphanage	\$ 860	\$ 1,791	\$ 2,597	\$ 3,858	\$ 1,589	\$ 6,391	\$ 1,815	\$ 627	\$ 5,258	\$ 1,221	\$ 797
Other	\$ 2,621	\$ 5,457	\$ 7,912	\$ 11,755	\$ 4,842	\$ 19,474	\$ 5,529	\$ 1,910	\$ 16,021	\$ 3,722	\$ 2,429
Retail	\$ 3,001	\$ 6,249	\$ 9,060	\$ 13,461	\$ 5,545	\$ 22,300	\$ 6,332	\$ 2,187	\$ 18,346	\$ 4,262	\$ 2,781
Service	\$ 2,602	\$ 5,417	\$ 7,854	\$ 11,669	\$ 4,807	\$ 19,332	\$ 5,489	\$ 1,896	\$ 15,904	\$ 3,695	\$ 2,411
Telecomm.	\$ 3,891	\$ 8,101	\$ 11,746	\$ 17,452	\$ 7,189	\$ 28,910	\$ 8,209	\$ 2,836	\$ 23,784	\$ 5,525	\$ 3,606

PREDICTED SALARY ESTIMATES - by Sector of Economic Activity and Position (Government Organizational Structure Type Only)

The below table uses a statistical model to estimate salaries for all positions in all sectors while assuming an organizational structure type of Government. The reader can choose characteristics--i.e. Position (along the horizontal) and Economic Sector (along the vertical)--to specify of the salary query. All other salary drivers are calculated using the average among the 953 observations. E.g., for a Government organization operating in the Banking Sector, the estimated salary offered to the Accountant position is \$15,141; the salary paid to the Mechanic position employed in the Manufacturing sector is \$4,274.

	Accountant	Cleaning Crew	Cook	Doctor	Driver	Engineer	Executive	Handyman	IT Prof.	Laborer	Mechanic	
Sector of Economic Activity	Agriculture	\$ 19,026	\$ 3,351	\$ 4,469	\$ 49,264	\$ 7,184	\$ 15,439	\$ 42,312	\$ 5,111	\$ 18,482	\$ 4,513	\$ 11,818
	Airlines	\$ 7,582	\$ 1,335	\$ 1,781	\$ 19,632	\$ 2,863	\$ 6,153	\$ 16,861	\$ 2,037	\$ 7,365	\$ 1,798	\$ 4,710
	Banking	\$ 15,141	\$ 2,667	\$ 3,557	\$ 39,205	\$ 5,717	\$ 12,287	\$ 33,672	\$ 4,067	\$ 14,708	\$ 3,591	\$ 9,405
	Construction	\$ 10,769	\$ 1,897	\$ 2,530	\$ 27,884	\$ 4,066	\$ 8,739	\$ 23,949	\$ 2,893	\$ 10,461	\$ 2,554	\$ 6,689
	Education	\$ 6,759	\$ 1,191	\$ 1,588	\$ 17,502	\$ 2,552	\$ 5,485	\$ 15,032	\$ 1,816	\$ 6,566	\$ 1,603	\$ 4,199
	Gasoline	\$ 15,859	\$ 2,793	\$ 3,725	\$ 41,065	\$ 5,988	\$ 12,870	\$ 35,270	\$ 4,260	\$ 15,406	\$ 3,762	\$ 9,851
	Hotels & Lodging	\$ 7,098	\$ 1,250	\$ 1,667	\$ 18,379	\$ 2,680	\$ 5,760	\$ 15,786	\$ 1,907	\$ 6,895	\$ 1,684	\$ 4,409
	Humanitarian	\$ 8,018	\$ 1,412	\$ 1,884	\$ 20,762	\$ 3,028	\$ 6,507	\$ 17,832	\$ 2,154	\$ 7,789	\$ 1,902	\$ 4,981
	Int'l Development	\$ 7,260	\$ 1,279	\$ 1,705	\$ 18,798	\$ 2,741	\$ 5,891	\$ 16,145	\$ 1,950	\$ 7,052	\$ 1,722	\$ 4,509
	Medical	\$ 7,518	\$ 1,324	\$ 1,766	\$ 19,467	\$ 2,839	\$ 6,101	\$ 16,720	\$ 2,020	\$ 7,303	\$ 1,783	\$ 4,670
	Manufacturing	\$ 6,881	\$ 1,212	\$ 1,616	\$ 17,817	\$ 2,598	\$ 5,584	\$ 15,303	\$ 1,848	\$ 6,684	\$ 1,632	\$ 4,274
	Orphanage	\$ 2,993	\$ 527	\$ 703	\$ 7,750	\$ 1,130	\$ 2,429	\$ 6,656	\$ 804	\$ 2,908	\$ 710	\$ 1,859
	Other	\$ 9,120	\$ 1,606	\$ 2,142	\$ 23,615	\$ 3,444	\$ 7,401	\$ 20,283	\$ 2,450	\$ 8,860	\$ 2,163	\$ 5,665
	Retail	\$ 10,444	\$ 1,840	\$ 2,453	\$ 27,042	\$ 3,943	\$ 8,475	\$ 23,226	\$ 2,805	\$ 10,145	\$ 2,477	\$ 6,487
	Service	\$ 9,054	\$ 1,595	\$ 2,127	\$ 23,443	\$ 3,418	\$ 7,347	\$ 20,135	\$ 2,432	\$ 8,795	\$ 2,147	\$ 5,624
Telecomm.	\$ 13,540	\$ 2,385	\$ 3,181	\$ 35,059	\$ 5,112	\$ 10,987	\$ 30,111	\$ 3,637	\$ 13,153	\$ 3,211	\$ 8,410	
	Messenger	Office Staff	Nurse	Office Mgr.	Other	Program Mgr.	Secretary	Security Guard	Senior Mgr.	Teacher	Wait Staff	
Sector of Economic Activity	Agriculture	\$ 4,864	\$ 10,128	\$ 14,684	\$ 21,817	\$ 8,987	\$ 36,141	\$ 10,262	\$ 3,545	\$ 29,733	\$ 6,907	\$ 4,508
	Airlines	\$ 1,938	\$ 4,036	\$ 5,852	\$ 8,694	\$ 3,581	\$ 14,402	\$ 4,089	\$ 1,413	\$ 11,848	\$ 2,752	\$ 1,796
	Banking	\$ 3,871	\$ 8,060	\$ 11,686	\$ 17,362	\$ 7,152	\$ 28,761	\$ 8,166	\$ 2,821	\$ 23,662	\$ 5,497	\$ 3,587
	Construction	\$ 2,753	\$ 5,732	\$ 8,311	\$ 12,348	\$ 5,087	\$ 20,456	\$ 5,808	\$ 2,006	\$ 16,829	\$ 3,910	\$ 2,552
	Education	\$ 1,728	\$ 3,598	\$ 5,217	\$ 7,751	\$ 3,193	\$ 12,840	\$ 3,646	\$ 1,259	\$ 10,563	\$ 2,454	\$ 1,602
	Gasoline	\$ 4,055	\$ 8,442	\$ 12,240	\$ 18,186	\$ 7,491	\$ 30,126	\$ 8,554	\$ 2,955	\$ 24,784	\$ 5,758	\$ 3,758
	Hotels & Lodging	\$ 1,815	\$ 3,778	\$ 5,478	\$ 8,139	\$ 3,353	\$ 13,483	\$ 3,828	\$ 1,322	\$ 11,093	\$ 2,577	\$ 1,682
	Humanitarian	\$ 2,050	\$ 4,268	\$ 6,188	\$ 9,194	\$ 3,787	\$ 15,231	\$ 4,325	\$ 1,494	\$ 12,530	\$ 2,911	\$ 1,900
	Int'l Development	\$ 1,856	\$ 3,864	\$ 5,603	\$ 8,325	\$ 3,429	\$ 13,790	\$ 3,916	\$ 1,353	\$ 11,345	\$ 2,636	\$ 1,720
	Medical	\$ 1,922	\$ 4,002	\$ 5,802	\$ 8,621	\$ 3,551	\$ 14,281	\$ 4,055	\$ 1,401	\$ 11,749	\$ 2,729	\$ 1,781
	Manufacturing	\$ 1,759	\$ 3,663	\$ 5,311	\$ 7,890	\$ 3,250	\$ 13,071	\$ 3,711	\$ 1,282	\$ 10,753	\$ 2,498	\$ 1,630
	Orphanage	\$ 765	\$ 1,593	\$ 2,310	\$ 3,432	\$ 1,414	\$ 5,686	\$ 1,614	\$ 558	\$ 4,677	\$ 1,087	\$ 709
	Other	\$ 2,332	\$ 4,855	\$ 7,039	\$ 10,458	\$ 4,308	\$ 17,325	\$ 4,919	\$ 1,699	\$ 14,253	\$ 3,311	\$ 2,161
	Retail	\$ 2,670	\$ 5,559	\$ 8,060	\$ 11,976	\$ 4,933	\$ 19,839	\$ 5,633	\$ 1,946	\$ 16,321	\$ 3,791	\$ 2,475
	Service	\$ 2,315	\$ 4,819	\$ 6,988	\$ 10,382	\$ 4,276	\$ 17,198	\$ 4,883	\$ 1,687	\$ 14,149	\$ 3,287	\$ 2,145
Telecomm.	\$ 3,462	\$ 7,207	\$ 10,450	\$ 15,526	\$ 6,395	\$ 25,720	\$ 7,303	\$ 2,523	\$ 21,159	\$ 4,915	\$ 3,208	

C. COMPLETE STATA REGRESSION OUTPUT (COPY)

Source	SS	df	MS	Number of obs = 953
Model	1059.6427	58	18.269702	F(58, 894) = 58.98
Residual	276.90483	894	0.3097369	Prob > F = 0
Total	1336.5475	952	1.4039365	R-squared = 0.7928
				Adj R-squared = 0.7794
				Root MSE = 0.55654

ISalary	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]
IDpost					
Office Staff*					
Accountant	0.2075152	0.0975877	2.13	0.034	0.0159875 0.3990429
Cleaning Crew	-0.061612	0.1350265	-0.46	0.648	-0.326618 0.203394
Cook	0.2753687	0.1941391	1.42	0.156	-0.105653 0.6563901
Doctor	1.269757	0.2354346	5.39	0.000	0.8076878 1.731826
Driver	0.1604664	0.1165817	1.38	0.169	-0.068339 0.3892722
Engineer	0.2407131	0.1996654	1.21	0.228	-0.151154 0.6325806
Executive	0.5936528	0.1101057	5.39	0.000	0.3775571 0.8097485
Handyman	0.1442924	0.1419441	1.02	0.310	-0.13429 0.4282749
IT Professional	-0.005029	0.152659	-0.03	0.974	-0.304641 0.2945824
Laborer	0.1531884	0.1455227	1.05	0.293	-0.132418 0.4387943
Mechanic	0.0977336	0.1347689	0.73	0.469	-0.166767 0.3622338
Messenger	0.0733843	0.1430465	0.51	0.608	-0.207362 0.3541304
Nurse	0.6937326	0.1736457	4.00	0.000	0.3529318 1.034533
Office Manager	0.2099875	0.0993378	2.11	0.035	0.0150251 0.40495
Other	0.0662252	0.1029839	0.64	0.520	-0.135893 0.2683436
Program Manager	0.3266531	0.1390842	2.35	0.019	0.0536835 0.5996226
Secretary	-0.051237	0.0979508	-0.52	0.601	-0.243477 0.1410033
Security Guard	-0.200001	0.1678497	-1.19	0.234	-0.529426 0.1294246
Sr. Manager	0.3769616	0.0960009	3.93	0.000	0.1885324 0.5653908
Teacher	-0.298777	0.1814003	-1.65	0.100	-0.654797 0.0572435
Wait Staff	0.1884574	0.1846192	1.02	0.308	-0.17388 0.5507949
Manufacturing*					
Agriculture	1.017051	0.1579131	6.44	0.000	0.7071273 1.326975
Airlines	0.0970009	0.1371975	0.71	0.480	-0.172266 0.3662676
Banking	0.788657	0.1318236	5.98	0.000	0.5299372 1.047377
Construction	0.4479145	0.1076586	4.16	0.000	0.2366216 0.6592075
Education	-0.017811	0.1585925	-0.11	0.911	-0.329068 0.2934455
Gas & Petro	0.8350161	0.2046643	4.08	0.000	0.4333376 1.236695
Hotels	0.0310817	0.1135112	0.27	0.784	-0.191698 0.2538612
Humanitarian	0.1529681	0.129379	1.18	0.237	-0.100954 0.40689
Int'l Development	0.0535935	0.138563	0.39	0.699	-0.218353 0.3255403
Medical	0.0885744	0.1390697	0.64	0.524	-0.184367 0.3615156
Orphanage	-0.832441	0.2002297	-4.16	0.000	-1.225416 -0.439466
Other	0.2817482	0.1187715	2.37	0.018	0.0486448 0.5148515
Retail	0.4172607	0.1177614	3.54	0.000	0.1861397 0.6483818
Service	0.27442	0.1099701	2.50	0.013	0.0585904 0.4902496
Telecomm	0.6768772	0.1312371	5.16	0.000	0.4193086 0.9344459

ISalary	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]
NGO*	-0.207425	0.0906485	-2.29	0.022	-0.385334 -0.029517
For-Profit	-0.315377	0.0943117	-3.34	0.001	-0.500475 -0.130279
Other	-0.543192	0.1286073	-4.22	0.000	-0.795599 -0.290785
Religious	-0.432316	0.1482602	-2.92	0.004	-0.723295 -0.141337
Government					
None*	0.1984281	0.0684002	2.90	0.004	0.0641843 0.3326718
<2yrs	0.4069688	0.0704761	5.77	0.000	0.268651 0.5452866
2-4yrs	0.6276925	0.0792913	7.92	0.000	0.4720736 0.7833113
5-10yrs	0.9783255	0.1074717	9.10	0.000	0.7673994 1.189252
>10yrs					
Constant*	-0.015142	0.0546519	-0.28	0.782	-0.122403 0.0921192
Daily	0.1062175	0.0655242	1.62	0.105	-0.022382 0.2348167
Weekly	0.2498753	0.0764219	3.27	0.001	0.0998881 0.3998625
Monthly	0.3458174	0.0775983	4.46	0.000	0.1935214 0.4981135
Less-than Monthly					
Did not complete HS*					
HS Diploma	0.2219051	0.0737072	3.01	0.003	0.0772458 0.3665644
University Degree	0.4510082	0.0847877	5.32	0.000	0.2846022 0.6174143
Graduate Degree	0.5275913	0.1207605	4.37	0.000	0.2905841 0.7645984
None Required*					
Complete On-the-job	-0.128171	0.109767	-1.17	0.243	-0.343602 0.0872603
Some Rqd.&On-the-job	0.1780587	0.0801339	2.22	0.027	0.0207863 0.3353311
Must Possess Prior	0.3820331	0.0822432	4.65	0.000	0.2206208 0.5434454
Reads English	0.2419836	0.0568477	4.26	0.000	0.1304131 0.3535542
Employee is Expat	0.4483589	0.1120113	4.00	0.000	0.228523 0.6681947
Employer is non-Haitian	0.4219276	0.0704885	5.99	0.000	0.2835853 0.5602698
City Total Population	0.0010846	0.0001482	7.32	0.000	0.00007937 0.0013755
Constant	6.972973	0.180664	38.60	0.000	6.618398 7.327548

* Omitted variable