Wage Inequality in Pakistan: How Does Contract Status Matter?

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Corresponding author. EM Normandie Business School, Métis Lab
Email: tnguyenhuu@em-normandie.fr
Address: 20 Quai Frissard – 76600 Le Havre

Abstract

This research investigates the wage gap associated with contract status in Pakistan. The estimation shows that holding a fixed-term written contract (FTC) or no written contract (NWC) instead of a long-term written contract could significantly reduce wages for Pakistani workers. However, the extent of wage inequality depends on how defining contract status. If we rely on the Pakistani national definition of FTC, engaging in an FTC is likely to suffer the highest penalty in terms of hourly wage. Such a finding no longer holds once the international standard definition of FTC is considered. Besides, the wage gaps associated with contract status change if we refer to monthly wage as the independent variable instead of hourly wage. The self-selection into wage workers and endogeneity associated with contract status are carefully taken into account.

Keywords: Wage gaps; contract status; long-term contract; fixed-term contract; non-written contract; Pakistan.

Jel-code: J31, J41

1. Introduction

In the past several decades, developing Asia has achieved outstanding growth rates in the globalization process. Unfortunately, this impressive growth in the emerging Asia seemly has not automatically brought about sufficient decent work for the expanding population. Particularly, temporary jobs are prevailing, in the forms of fixed-term, project or task-based contracts, seasonal and casual work, including day-laborers. They are often claimed to be associated with lower remuneration and poor working conditions (ILO, 2008; Ofreneo, 2013; OECD, 2014; ILO, 2015b, among others). Wage inequality induced by different contractual arrangements has been broadly addressed in developed countries (see for example Mertens et al., 2007; Comi and Brasseni, 2012; Bosio, 2009, 2014). Meanwhile, in developing Asia, where this problem is apparently acute, empirical research on this topic remains scarce. This paper attempts to fill this research gap by focusing on the interesting case of Pakistan.

Pakistan is a South Asian country with a vast and increasing working age population, but also struggling to provide sufficient decent work. There is a large share of Pakistani wage employees lacking a long-term contractual agreement who engage in short-term contracts or oral arrangements. Paradoxically, to the best of our knowledge, empirical work focusing on wage differentials related to contract status in Pakistan seems non-existent, possibly owning to a lack of data. In this context, this research aims to assess if those workers suffer from wage penalties just due to their contract status, after controlling for various individual, job and geographical characteristics.

The paper is structured as follows. Section 2 gives a brief literature review then Section 3 describes data and estimation strategies. Section 4 presents empirical findings. Section 5 gives final remarks.

2. Literature review

While studying the wage differential associated with contract status, the literature generally distinguishes two kinds of contracts: permanent and temporary contracts. The temporary job primarily includes fixed-term contracts (FTC) or casual ones to a lesser extent. Existing evidence refers either to simply ‘raw’ wage gap (i.e., the ratio of temporary employment wage to permanent employment wage) or to the wage gap derived from empirical wage equations (‘pure’ wage gap) in which worker’s personal and household characteristics are also included. Notice that temporary workers generally earn less than their permanent counterparts (McGinnity et al., 2005; ILO, 2008, 2015b; Jahn and Pozzoli, 2013; OECD, 2014, among others).

There is an increasing and rich literature on the case of developed countries.[1] Empirical findings almost report the presence of wage inequality against temporary workers. For instance, Mertens et al. (2007) observe an earning differential among low earners in West Germany. By contrast, no earning difference is found among high earners. Differently in Spain, a wage penalty is observed, regardless of the workers earning level. The picture remains the same in Italy, France, and other European countries (Bosio, 2014; Regoli et al., 2019). Particularly in countries such as Italy or Greece, low-paid temporary workers suffer higher penalties than their high-paid counterparts (Comi and Brasseni, 2012; Bosio, 2014). The wage inequality pattern appears stable across the wage distribution in Austria and Hungary. In contrast, the penalty is wider for high-paid temporary workers than for low-paid ones in Poland (Comi and Brasseni, 2012) and Spain (Olivier and Sard, 2019). Such a wage inequality against temporary workers also occurs in other developed countries such as New Zealand (Cochrane et al., 2017), Australia (Lab and Wooden, 2019), and South Korea (Kim and Skott, 2016).

Notice that the empirical evidence on 'pure' wage gaps between temporary and permanent employment is extremely limited in developing Asian countries.[2] Besides, there is some evidence on the raw wage gap between the two employment kinds. For instance, Hasan and Jandoc (2009) find that in the Philippines in 2006, permanent workers earned on average 51 percent higher than casual workers did. In Bangladesh, the average wage ratio between casual and regular workers was reported no less important, of around 40 percent in 2010 (ILO, 2013). In Indonesia, wage ratios represent respectively 83.3 percent for FTC workers and 73.8 percent for outsourced workers compared to their permanent counterparts (Akatiga Foundation et al., 2010; cited in Serrano et al., 2014).

Among Asian developing economies, India is probably one of the rare countries with available 'pure' estimates. Based on wage equations constructed for workers in the organized manufacturing sector in India, Bhandari and Heshmati (2008) find that permanent workers earned on average 45.5 percent more than non-permanent workers after controlling for different individual human capital as well as job-related characteristics. Besides, the authors argue that experience plays the most vital role in explaining the pay difference between permanent and FTC workers. An explanation for its effect would be that Indian FTC workers cannot stick to a particular job for a long enough period to be able to reap the benefit of a significant wage return like that of a permanent worker. Notice that most of the available evidence on the wage penalty in Asia has been associated with the informal-formal wage differentials or 'raw' temporary wage gaps.

[1] See for example Mertens et al. (2007); Comi and Brasseni (2012); Bosio (2014); Lab and Wooden (2019); Regoli et al. (2019).

[2] In Asia, the statistics on 'pure' permanent-temporary job wage gaps only concern the OECD members like Japan, Korea.

Given the scarcity of estimates of the wage differential associated with temporary employment in developing Asian countries, this paper would considerably contribute to the literature. On the one hand, the research provides 'pure' estimates of wage gaps in Pakistan, an emerging Asian economy. On the other hand, over a simple comparison between temporary and permanent wage gaps, the data allow us to distinguish different contract statuses: a permanent contract, an FTC, or a non-written (also called 'oral') contract (NWC). The literature provides some evidence on the wage gap according to the contract status but only focuses on developed countries. For instance, Cochrane et al. (2017) conclude the presence of wage inequality for casual, temporary agency, and seasonal workers in New Zealand. Casual workers suffer the highest penalty, with a wage gap of 30.4% compared to permanent workers. The incidence is respectively 27% and 18.4% for temporary agency and seasonal workers. By contrast, the wage gap between FTC and permanent employees is statistically insignificant. In the same vein, Lab and Wooden (2019) provide an empirical investigation of Australian temporary employees by considering job status. While there is no wage differential between FTC and permanent workers, the authors observe a wage penalty for casual workers. Nevertheless, such a penalty only concerns low-paid workers, whereas high-paid counterparts benefit from a wage premium compared to permanent employees. Such a premium also benefits temporary agency workers.

3. Data and estimation strategy

3.1. Data

This research relies on the Pakistani LFS 2008-2009. Only wage workers are kept for the analyses. According to the Pakistani Labor Law (Aleksynska and Muller, 2015), FTCs, including renewals in Pakistan, could not last more than one year. Therefore, based on question 7.1 of the questionnaire,[3] we divide wage workers into three groups: (i) Long-term contract workers (LTC) whose contract lasts at least one year, (ii) Short-term contract (also called FTC) workers whose contract duration is less than one year, and (iii) NWC workers. Besides, the survey gives information on both weekly and monthly wages. To assure the comparability between workers, the hourly wage is taken as the dependent variable.

Table A1 in the Appendix reports descriptive statistics of the main variables used in this research. Overall, there are 25,047 wage workers, and most of them are male (89%), working in the private sector (70%) and/or urban areas (51%). Turning to contract status, Pakistani workers are almost engaged in NWC (61%). Given the above definition of LTC workers, the latter count for about 36% of Pakistani wage workers, and FTC workers only take a small proportion, with an

[3] This section provides information associated with job status: (1) Permanent/pensionable job, (2) Contract/agreement less than 1 year, (3) Contract/agreement up to 3 years, (4) Contract/agreement up to 5 years, (5) Contract/agreement up to 10 years, (6) Contract/agreement over 10 years, and (7) Without contract/agreement.

incident of 2.6%. Notice that if we refer to the definition of ILO about LTC workers (i.e., their contract lasts for at least three years), the incidence of FTC slightly goes up to 5.3%.

Moreover, Table 1 below displays some characteristics of Pakistani workers broken down by their contract status. We observe some common points across job status. There is no significant difference in gender, migration, and obtaining training. More precisely, about 90% of Pakistani workers are male, not migrant, and do not benefit from any training from employers, whatever their contract type.

Table 1. Characteristic of Pakistani workers

Variables	Long-term contract	Fixed-term contract	Non-written contract
Gender			
Female (%)	10.64	9.08	11.31
Male (%)	89.36	90.92	88.68
Age	37	31	31
Head of household (%)	60.5	40.32	39.54
Education level			
No education (%)	14.08	41.96	45.53
Elementary (%)	16.46	29.32	33.42
High school (%)	35.76	20.09	16.61
College and above (%)	33.70	8.63	4.45
Migration			
No migrant (%)	88.32	92.86	87.13
Migrated less than 1 year (%)	0.65	1.04	1.14
Migrated between 1-4 years (%)	2.20	0.60	2.27
Migrated between 5-9 years (%)	2.38	1.34	4.11
Migrated since 10 years or more (%)	11.52	3.72	6.38
Training			
No training (%)	89.57	91.4	86.75
On the job training (%)	3.71	4.91	6.87
Off the job training (%)	6.72	3.72	6.38
Industry			
Agriculture (%)	1.38	8.93	11.57
Manufacture (%)	17.51	50.30	51.40
Trade (%)	3.03	6.70	11.52
Services (%)	78.88	34.08	25.51
Public sector (%)	73.88	20.83	3.51
Rural area (%)	40.86	50.74	53.58

Besides, Table 1 shows some critical divergences between different contract statuses. First, household head workers are more engaged in LTC than other contract terms. Second, LTC workers

are almost qualified (70% reach either high school or college and above). In contrast, the inverse is true for non-permanent workers: 70% of FTC workers and 80% of NWC workers do not get a diploma or only an elementary. Third, LTC workers are almost found in services (78%), while FTC and NWC workers are primarily in manufacturing (50% for both kinds of workers). Fourth, most LTC employees work in the public sector (74%), whereas their FTC and NWC essentially work in the private sector (69% for FTC and 96% for NWC workers). Lastly, 60% of LTC workers are located in urban areas, while the incidence is less than a half for FTC and NWC workers.

3.2. Estimation strategy

We rely on the standard Mincerian earnings equation to estimate the wage gaps associated with contract status in Pakistan. The estimation equation is as follows:

$$w_i = \beta C_i + \gamma X_i + \varepsilon_i \quad [1]$$

where index *i* refers to individual *i*, *w* represents the hourly wage (in logarithm). *C* is a vector of contract status including two dummies for FTC and NWC, and β gives the associated wage gaps compared to a LTC. *X* is a set of controlled covariates and γ are the corresponding coefficients to be estimated.

An OLS estimation of Equation (1) could be threatened by two sources of bias: self-selection into wage workers or an endogeneity issue associated with contract types. In other words, there may be unobserved characteristics of workers that simultaneously affect their wages and their probability of engaging in FTC or NWC.

The self-selection into employment issue

First, if the self-selection into employment exists, we can rely on the two-stage model *à la Heckman* (Heckman, 1979) as following:

- At the first stage, we rely on the probit model to estimate the probability of being wage workers and compute the inverse Mills ratio:

$$ww_i = 1[s_i\delta + u_i] \quad [2]$$

where $ww_i = 1$ if the related individual i is wage worker. s_i is a vector of covariates that may influence the decision of being wage workers.

- In the second stage, we include the inverse Mills ratio (denoted by λ) computed from the first stage into the wage equation:

$$w_i = \beta C_i + \gamma_1 X_i + \gamma_2 \lambda_i + \varepsilon_i \quad [3]$$

If the Mills ratio is statistically significant, there is a sample selection bias due to the labor market participation and *vice versa*.

Notice that the Heckman model could correct self-selection bias if some identifying variables strongly affect the one probability of being a wage worker but not their wage level. Practical candidates include the income of the spouse, household wealth, non-labor household income, children (Puhani, 2000), whether parents are living together or are living in the same neighborhood (Nawata, 2004), and marital status. Given the available information of Pakistani LFS 2008-2009, marital status and whether the individual is head of their household are chosen as identifying variables. Indeed, married household heads may bear more pressure to work than others. By contrast, while their family status hardly significantly affects their offered wage.

The potential endogeneity associated with contract status

It is noteworthy that the OLS estimation of Equation (1) could be biased because of the potential endogeneity of NWC or FTC. Indeed, many factors can be the source of such endogeneity as, for example, those contracts are used to replace temporarily absent workers, to evaluate newly/young employees before offering them an LTC,[4] or to do work whose the end is not unspecified. To deal with this issue, we refer to the control function methods developed by Wooldridge (2015).

Notice that to be valid, excluded instruments must be correlated with contract types but not with wages. In this research, two candidates are likely relevant: *Searching* and *Sick leave*.

- *Searching* equals 1 if the associated wage worker is on "on the job searching" for another job and 0 otherwise.
- *Sick leave* equals 1 if the associated employee took at least one day for sick leave and 0 otherwise.

If FTC is applied to replace absent permanent workers, FTC workers are more likely laid off after the agreed period. Thus, they should have a higher incentive to search for another job while still working. In this case, *Searching* would be positively correlated with the FTC status. This statement seems to hold for Italian temporary workers (Picchio, 2006). However, if firms use FTC to evaluate newly hiring employees before offering them an LTC, the latter would have no incentive to search for a new job. Consequently, *Searching* should have a negative impact, in this case, on FTC. For NWC, due to a lack of a secured written contract, they are put in a more vulnerable situation, which may motivate them to search for another (perhaps more secure) job. Hence, *Searching* would be correlated with the two potential endogenous variables (FTC and NWC). However, this instrument difficultly affects the observed wage.

[4] Source : ILO, https://www.ilo.org/global/topics/non-standard-employment/WCMS_534826/lang--en/index.htm.

Besides, the renewal of FTCs or the possibility of getting an LTC should depend on the worker's performance. Consequently, the latter would avoid taking days off in case of sickness to show her ability and effort level to the employer (Picchio, 2006). This variable captures any leaves due to occupational sickness or injuries in our sample, and its impact on FTC is expected to be negative. Differently, *Sick leave* could have two opposite impacts on NWC workers. On the one hand, since the contract renewal does not exist, the associated worker would take leaves once she faces sickness or injuries. On the other hand, as in the case of FTC, an NWC employee can avoid taking sick leaves to show her motivation to the employer to get a more secure job (an LTC, for example). Consequently, the net impact of this instrument on the NWC variable is undetermined.

The estimation procedure is as follows:

- At the first stage, we do a bivariate probit model of NWC and FTC on the two excluded IVs and covariates given in Equation (1).

$$P(NWC_i, FTC_i = 1 | IV_i, X_i) \quad [4]$$

We rely on the bivariate probit estimator to control potential correlations between the two potential endogenous variables.

- At the second stage, we compute the associated generalized residuals (denoted by $\hat{\varepsilon}_i^{nwc}$ and $\hat{\varepsilon}_i^{ftc}$)[5] and introduce them to the equation wage. Equation (1) can be rewritten as:

$$w_i = \beta C_i + \gamma X_i + \theta^{nwc}\hat{\varepsilon}_i^{nwc} + \theta^{ftc}\hat{\varepsilon}_i^{ftc} + \varepsilon_i \quad [5]$$

- Finally, we do a test of joint significance of the two generalized residuals. Following Wooldridge (2015), it is a test of the null hypothesis that NWC and FTC are exogenous.

4. Empirical findings

4.1. Estimation analysis and interpretation

Table 2 presents the estimation results according to different models. Column (1) reports the OLS estimates, while column 2 represents the estimation of Equation (5) (cf., the second estimation

[5]Please refer to Wooldridge (2015, p. 428) for the formula to compute the "generalized residuals" in a probit model.

stage considering the endogeneity of NWC and FTC). The second estimation stage of the Heckman correction model is shown in column (3).[6]

[6] For the brevity purpose, the first estimation stage of Wooldridge's control function method and that of the Heckman model are not reported here. They are available upon request.

Table 2. Wage gaps in Pakistan

VARIABLES	(1) OLS	(2) IV	(3) Heckman
NWC	**-0.187*** **	**-0.570*** **	**-0.187*** **
	(0.014)	(0.075)	(0.013)
FTC	**-0.266*** **	**-0.753*** **	**-0.263*** **
	(0.026)	(0.203)	(0.026)
Female	-0.350***	-0.337***	-0.326***
	(0.016)	(0.016)	(0.014)
Migration (reference: no migrant)			
Less than 1 year	0.088**	0.099**	0.077*
	(0.042)	(0.043)	(0.041)
Between 1-4 years	0.027	0.025	0.009
	(0.027)	(0.027)	(0.027)
Between 5-9 years	0.037	0.027	0.025
	(0.027)	(0.027)	(0.027)
10 years or more	0.071***	0.062***	0.063***
	(0.014)	(0.015)	(0.014)
Age	0.034***	0.032***	0.034***
	(0.002)	(0.002)	(0.002)
Age square	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
Education level (reference: no education)			
Primary and Secondary	0.066***	0.059***	0.071***
	(0.010)	(0.010)	(0.010)
High School	0.200***	0.165***	0.204***
	(0.013)	(0.014)	(0.013)
College and above	0.611***	0.548***	0.583***
	(0.020)	(0.022)	(0.018)
Training (reference: no training)			
On the job training	0.069***	0.066***	0.081***
	(0.017)	(0.017)	(0.018)
Off the job training	0.027	0.018	0.055***
	(0.017)	(0.017)	(0.017)
Occupation	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes
Public sector	0.351***	0.119**	0.223***
	(0.015)	(0.048)	(0.022)
Rural area	-0.047***	-0.043***	-0.042***
	(0.008)	(0.008)	(0.009)
Region	Yes	Yes	Yes
$\hat{\varepsilon}^{nwc}$		0.214***	
		(0.041)	
$\hat{\varepsilon}^{ftc}$		0.215**	
		(0.088)	
lambda			-0.225***
			(0.030)
Constant	2.982***	3.323***	3.250***
	(0.049)	(0.082)	(0.059)
Observations	25,457	25,457	25,457
R-squared	0.416	0.417	

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Before commenting on whether contract status may generate wage differentials, it is vital to determine the most relevant model for our sample. Considering the endogeneity associated with contract status, the first-stage estimation shows that the two excluded IVs (*Searching* and *Sick leave)* are both statistically significant and affect contract types. Looking at NWC, the coefficients associated with both *Sick leave* and *Searching* are positive. It follows that an NWC worker is likely to search for another job, and once she faces occupational sickness or injuries, she will take sick leaves. As for FTC, both *Sick leave* and *Searching* are negative. Hence, an FTC worker tends to avoid occupational sickness/injury leaves to show her availability and motivation. Besides, it seems that FTC workers wait for an LTC proposed by their employer and have no incentive to search for a new job. Turning to the second-stage estimation (column 2 of Table 2), both $\hat{\varepsilon}_i^{ftc}$ and $\hat{\varepsilon}_i^{nwc}$ are statistically significant (even at the 1% risk level). Moreover, the joint significance test (of the null hypothesis that NWC and FTC are exogenous) is statistically significant.[7] Therefore, we can reject the null hypothesis. NWC and FTC are likely endogenous. Besides, column (3) reports a significant inverse Mills ratio (cf. lambda is statistically significant at the 1% risk level). The self-selection into wage workers is another issue of our sample. However, notice that estimated results of OLS (column 1 of Table 2) or Heckman estimator (column 3 of Table 2) are almost similar. Such an outcome possibly results in the fact that using different individual or job characteristics allows us to reduce unobserved heterogeneity and thus correct the selection bias. Given these different tests and outcomes, we rely on the control function method developed by Wooldridge (2015) to investigate the wage differentials associated with contract status for Pakistani workers.

As reported in column 2 of Table 2, both NWC and FTC workers highly suffer from penalties compared to their LTC counterparts. Indeed, the associated coefficients are statistically significant at the 1% risk level. Compared to LTC workers, the wage gap is about 58% lower for NWC workers and 75% lower for FTC workers, *ceteris paribus*. Also, the contract status wage gap is likely the most pronounced in Pakistan. Other factors affect the wage, but to a lesser extent as gender, education level, or institutional sector. For example, on average, Pakistani men workers earn 33% than their women counterparts do. Education positively affects wages. Particularly, holding a 'college or above' diploma increases, on average, the wage by 55% compared to 'no-education' does.

The existence of the penalty mentioned above necessarily calls for proper interpretations. Labor market and economic characteristics seem to be essential factors. First, as in many developing countries, the informal sector dominates the Pakistani economy. Although constituting over 70% of non-farm jobs in Pakistan, this sector provides jobs with poor working conditions, fewer protections, a weak application of national labor legislation and regulations, largely unorganized. Also, the organized representation of employees and employers mainly exists in the formal economy but remains low (ILO, 2015a). In such circumstances, and since most NWC

[7] The associated statistic, following an *F* distribution, is 14.8 allowing a p-value smaller than 0.0001.

workers (56%) are engaged in the informal sector, it is not surprising that they suffer a penalty compared to LTC workers. Second, during the related survey year, the country experienced macroeconomic instability, fiscal contraction, and an increase of unemployment wage workers: 5.5 percent (up from 5.2%) with a higher proportion of unemployed women (65.3%) than men (34.7%). The perceived job volatility further pushes downward pressure on wages. These economic and labor market conditions would negatively affect wages for FTC workers.

Another astonishing result is that FTC workers seem to suffer a higher penalty than their NWC counterparts (cf., FTC workers earn 75% less than LTC workers do, while the incidence is 57% for NWC workers). Two reasons could explain such an outcome. On the one hand, since we have no information on the contract duration, NWC workers may work for the employer for several years and get some negotiation powers for their wages. On the other hand, such wage differentials could be caused by the definition of FTC or the measure of wage.

4.2. Robustness verifications

As robustness tests, we perform two additional verifications. First, FTC is redefined according to the ILO definition: a contract is called fixed-term if its duration lasts less than three years. Consequently, an LTC lasts at least three years. The estimation with the new definitions of FTC and LTC still supports that NWC and FTC are endogenous.[8] However, the wage inequality incidences change. FTC workers no longer suffer the highest penalty. More precisely, an FTC worker earns, on average, 57% less than an LTC worker, whereas the incidence is 60% for an NWC worker.

Second, the highest penalty suffered by FTC workers reported in column 2 of Table 2 may only concern an hourly wage but not a monthly wage. As a verification, we estimate workers whose information on monthly wage is available. Once again, the estimation supports the endogeneity of NWC and FTC. Most importantly, FTC becomes statistically insignificant, even at the 10% risk level regardless of the definitions of FTC. Besides, NWC workers appear to have the highest wage penalty. Compared to LTC workers, the wage gaps are, on average, 78% lower for NWC workers. These findings are possibly come from the fact that NWC workers are almost casual (41%) or paid workers by piece rate or work performed (22%) whose job duration lasts one or some weeks. Consequently, only 45% of them get a monthly wage. By contrast, more than 73% of FTC workers get a monthly wage.

[8] Estimated results are available upon request.

5. Conclusion

This paper studies the wage penalties associated with some deviations from long-term written contract work in Pakistan. The results point out the presence of significant wage discrimination suffered by FTC and NWC workers. These findings highlight the importance of a stable contractual arrangement and labor market regulation enforcement in tackling the wage penalty and assuring decent work for all in Pakistan. With a mega labor force and demographic dividend, Pakistan should prioritize job quality and equality to achieve inclusive and durable development and mitigate social instability.

This study is a timely reply to the urgent demand for empirical evidence on contract-status-related wage differentials in Pakistan, serving as a reference for labor policymakers.

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Appendix

Variables	Definition	Type	Mean	Std. Dev	Min	Max
Hourly wage (in log)	The log of hourly wage	Continuous	3.842	0.805	-1.609	8.74
Long-term contract	= 1 if the contract last for at least 1 year	Dummy	0.363	0.481	0	1
Non-written contract	= 1 if it is an oral/non-written contract	Dummy	0.61	0.488	0	1
Fixted-term contract	= 1 if the contract last less than 1 year	Dummy	0.026	0.16	0	1
Age	Age of birth	Continuous	33.161	11.657	15	64
Female	= 1 if female	Dummy	0.194	0.312	0	1
Head of household	= 1 if head of household	Dummy	0.47	0.5	0	1
Marital status	= 1 if single, 2 if married, 3 if widowed, and 4 if divorced/separated	Discrete	1.70	0.51	1	4
Education	= 1 if no education, 2 if primary and secondary, 3 if high school, and 4 if college and above	Discrete	2.20	1.96	1	4
Migration	= 1 if no migrant, 2 if migrated less than 1 year, 3 if migrated between 1-4 years, 4 if migrated between 5-9 years and 5 if migrated since 10 years or more	Discrete	1.47	1.216	1	5
Training	= 1 if no training, 2 if on the job training, and 3 if off the job training	Discrete	0.184	0.528	1	3
Industry	= 1 if agriculture, 2 if manufacture, 3 if trade, and 4 if services	Discrete	2.903	1.066	1	4
Public sector	= 1 if working in the public sector	Dummy	0.295	0.456	0	1
Rural area	= 1 if living in the rural area	Dummy	0.486	0.50	0	1