

MINIMUM WAGE VIOLATION IN SOUTH AFRICA

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ABSTRACT

Minimum wage legislation is central in South African policy discourse, with both strong support and strong opposition. The validity of either position depends, however, on the effectiveness of minimum wage enforcement. Using detailed matching of occupational, sectoral and locational codes in the 2007 Labour Force Survey to the gazetted minimum wages, this paper presents, we believe for the first time, estimates of minimum wage violation in South Africa. Our results give considerable cause for concern. Minimum wage violation in South Africa is disturbingly high. We find that 44% of covered workers get paid wages below the legislated minimum, whilst the average depth of shortfall is 35% of the minimum wage. Around this average, violation is most prevalent in the Security, Forestry and Farming Sectors. We hope that the quantifications in this paper will provide a more solid basis for discussion of minimum wage levels and their enforcement in South Africa.

KEY WORDS: Minimum Wage Violation, South Africa

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1. INTRODUCTION

Minimum wage legislation is central in South African policy discourse, with both strong support and strong opposition. The situation is similar in many if not most developing countries. As Ronconi (2008) points out, however, it is not the lack of labour regulations in developing countries which is the key issue. Indeed, most developing countries have an extensive web of labour regulations. In South Africa, statutory minimum wages vary by occupation, sector and location, and consequently there are over 36 different wage minima. Hence, it seems that the key issue here is not a lack of legislation but rather a lack of compliance amongst employers, due to imperfect enforcement (Basu, Chau, and Kanbur, 2010).

How well is the minimum wage enforced in South Africa? Despite the economic and political importance of the issue in the country, we do not as yet have a satisfactory quantified answer to the question, leaving room for anecdote and speculation¹. Evidence on compliance levels in South Africa is perhaps limited due to the difficulty of mapping the statutory minima to their respective sectors, occupations, and locations. This paper constitutes an attempt to undertake such an analysis for South Africa. Our objective is to quantify minimum wage violation in South Africa, with an index of violation that can measure the level, depth and severity of violation. Using detailed matching of occupational, sectoral and locational codes in the 2007 Labour Force Survey to the gazetted minimum wages, this paper presents, we believe for the first time, estimates of minimum wage violation in South Africa.

Our results give considerable cause for concern. Minimum wage violation in South Africa is disturbingly high. We find that 44% of covered workers get paid wages below the legislated minimum, whilst the average depth of shortfall is 35% of the minimum wage. Around this average, violation is most prevalent in the Security, Forestry and Farming Sectors. We hope that the quantifications in this paper will provide a more solid basis for discussion of minimum wage levels and their enforcement in South Africa.

The rest of the paper is structured as follows. Section 2 below turns to a discussion of minimum wage institutions and wage data in South Africa. Section 3 uses graphical and numerical methods to quantify violation of minimum wages in South Africa. The final section, Section 4, concludes.

2. MINIMUM WAGE INSTITUTIONS AND DATA IN SOUTH AFRICA

In South Africa, the body responsible for issuing state legislation in sectors it deems vulnerable is the Employment Conditions Commission² (ECC). The ECC is a representative body within the Department of Labour (DoL), which was established in 1999 in order to advise the Minister of Labour on appropriate and feasible sectoral wage minima, known as “Sectoral Determinations”. The broad aim of the ECC is to protect vulnerable workers in the South African labour market, that is, sectors in which workers are likely to be exploited, or in which worker organizations and trade unions are absent, and where workers are not appropriately covered by bargaining councils or other wage regulating mechanisms (DoL, 2003). For instance, agricultural and domestic workers form two of the most vulnerable groups within this context in the South African labour market.³

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- 1 There is growing evidence of non-compliance in other developing countries. For example, in Argentina, only half of the workforce receives legally mandated benefits (Ronconi, 2008). Minimum wage non-compliance rates in Kenya reach a disturbingly high estimate of 67% for higher skilled occupations in urban areas (Andalón and Pagés, 2008). Studies also find substantial non-compliance in other developing countries such as Brazil (Lemos, 2009), Trinidad and Tobago (Strobl and Walsh, 2003) and several Latin American countries (Maloney and Nuñez, 2003).
 - 2 The ECC was established in 1999 when it replaced the Wage Board, in accordance with the Basic Conditions of Employment Act (BCEA), No 75 of 1997.
 - 3 A complete listing of the sectoral determinations for South Africa can be found at the website of the Department of Labour (DoL). Available from: <http://www.labour.gov.za/legislation/sectoral-determinations/sectoral-determination>. [Accessed online September 2009].

The DoL uses a team of labour inspectors whose job is to monitor and enforce compliance with these sectoral determinations. In 2007, there were a total of 781 labour inspectors employed in 127 labour centers in South Africa (DoL figures). Inspections in most cases are triggered by complaints by clients (re-active inspections), whilst high risk sectors are identified and targeted through focused pro-active and blitz inspections. The enforcement process has a number of steps. Once an inspection is conducted, if the firm is found to be in non-compliance, the inspector issues a written undertaking. The firm has 21 days in which to comply with the terms of the undertaking. After 21 days, a follow-up inspection is conducted. If the firm is still found to be in non-compliance, another written document, namely a compliance order, is issued. The employer now has another 21 days to comply with the terms of the compliance order. If after 21 days the firm is still found to be in non-compliance, the inspector follows the procedures to refer the case to the Labour Court.

There has been some discussion attributing regional variation in the degree of violation of minimum wage laws, to differences in the numbers and distribution of inspectors within areas, as well as the possibility of the corruption of the inspectorate deployed. Scant and poor quality data on the inspectorate however, renders this a difficult set of propositions to investigate further.

The ECC sectoral determinations set general conditions for employment such as minimum wages, working hours, number of leave days, and termination rules. There are 11 different sectoral determinations set by the ECC. Data restrictions mean that we can consider only 9 of these, specifically Forestry, Agriculture, Contract Cleaning, Taxi Operators, Civil Engineering, Private Security, Domestic Workers, Wholesale and Retail, and Hospitality.⁴ The wage minima are regularly updated for inflation through a formal government gazetting process. Ultimately though, it is important to emphasise that within the South African labour market, no unitary national wage minimum exists.

Labour market data in the post-apartheid period is primarily available from two nationally representative household survey series, the October Household Surveys (OHSs) and the Labour Force Surveys (LFSs)⁵. The OHSs collected labour market and other data annually for the period between 1995 and 1999. The OHS was replaced in 2000 by the LFS, which until 2007 was conducted biannually. While desirable, comparisons between the OHSs and LFSs are inadvisable, since questions relating to the individual's employment status changed in the cross-over from the OHS to the LFS. Furthermore the LFS provides a far more detailed explanation of what constitutes work, and therefore captures irregular and informal work activities more comprehensively than the OHS (Casale *et al.* 2004). Given these data issues, the analysis of enforcement in the South African labour market below uses data from the September 2007 LFS⁶, the latter being the last September edition of the biannual LFSs⁷.

Sectoral minima issued are specific to the location of the workers. In particular though, the Department of Labour has designated local municipalities to areas A, B, and C for the different sectoral determinations. This demarcation was conducted on the basis of the average household income recorded in the 1996 census for the municipal area concerned. The three areas were as follows:

- A – Average income greater than R24, 000 per annum
- B – Average income between R12, 000 and R24, 000 per annum
- C – Average income less than R12, 000 per annum

4 In the analysis that follows below, the sectoral determination covering learnerships was excluded due to a lack of information in the LFS pertaining to learners. The sectoral determination applicable to children working in performance arts was also excluded since children are not classified as being part of the working age population (15 to 65 years) in the LFS.

5 From 2008, the LFSs were replaced by Quarterly Labour Force Surveys (QLFSs).

6 Unfortunately, the QLFS does not contain information on income and hence estimates for 2008 could not be included in this analysis.

7 Information on the number of covered workers by magisterial district from the 2000 Income Expenditure Survey (IES) of StatsSA was also used in the mapping process.

Generally, A areas are urban, B areas are semi-urban, and other areas (C) are rural areas. The wages in area A are the highest, followed by area B, while area C and other areas have the lowest wages. It is important to note that the area designations A, B, and C are not the same across different sectoral determinations. For example, some local municipalities classified as Area A for farm workers fall under Area B in the retail sector. In order to assign individuals to area types, it was first necessary to match the geographical information available in the LFS 2007 to the areas listed under the sectoral determinations. For the September 2007 LFS, the local municipalities listed under the various sectoral determinations allowed for allocation of the workers to area A, B, C. It is worth noting that, in the absence of detailed information on area of work in the LFS, it was necessary to assume that the area in which the individual resided was the same as where he/she worked. However, the possibility that individuals work outside of the area in which they live renders this an imperfect measure. Finally, monthly minima published by the ECC are all based on a 45-hour work week. Workers working longer (or shorter) hours would therefore be paid a higher (or lower) wage than the published average. Consequently, the applicable minimum wages were adjusted according to the hours worked by each individual. Specifically, we derive an adjusted minimum wage (w_a^m) as the product of the stipulated minimum wage (w^m) and the individual's hours worked (h), divided by 45⁸.

$$w_a^m = \frac{w^m * h}{45}$$

3. RESULTS

As a point of departure, a graphical approach is used to investigate the distribution of wages around the stipulated minima across the nine sectoral determinations. Kernel density plots⁹ are presented below for 2007 of the log of monthly wages for each of the different sectoral determinations. The vertical line represents the natural logarithm of the mean adjusted monthly minimum wage in 2007. Under full compliance one would expect no wages of workers covered by the respective sectoral determinations to lie below the vertical line, causing a single 'spike' at this point in the wage distribution.

However, as the basic visual evidence provided in Figure 1 below would seem to suggest, significant spiking at the respective minima is not evident for many of the sector-occupation-area cells under review here. Put differently, this is initial evidence of relatively weak enforcement of sectoral minimum wage laws in South Africa.

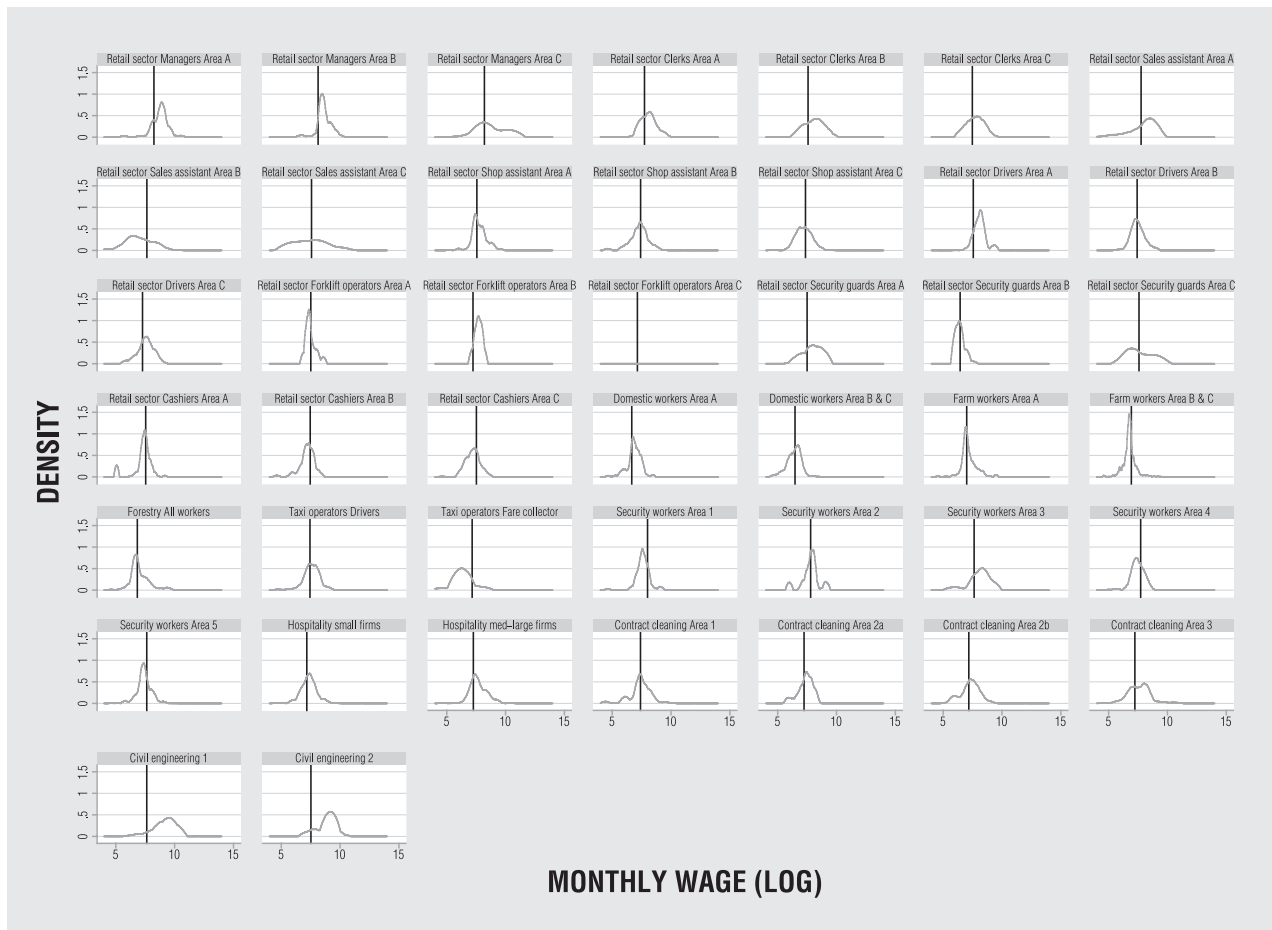
8 The reported 'hours worked' variable is truncated at 84 hours to avoid a situation where this adjustment leads to very high minimum wages for people who work very long hours. This implies truncation at or around the 98th or 99th percentile of the 'hours worked' variable.

9 The kernel density function approximates the probability density function $f(x)$ from observations on a random variable x . The Kernel density approximation of an independently and identically distributed random sample (x_1, x_2, \dots, x_n) may be expressed by the following equation:

$$\hat{f}_h(x) = \frac{1}{nh} \sum_{i=1}^n K \left[\frac{x - x_i}{h} \right]$$

where the function K , which determines the weights, is named the "kernel," and h is a smoothing parameter known as the 'bandwidth' (Maloney & Nuñez, 2003).

FIGURE 1: Kernel Density Estimates of wages, 2007



SOURCE: Authors' calculations using LFS September 2007 (StatsSA) and ECC sectoral determinations.

NOTES: The vertical line represents the mean minimum wage (logged) in 2007.

As the kernel density estimates of the wage distributions presented above seem to suggest, there is a problem of low enforcement of minimum wages in South Africa, with large proportions of workers in some sectors earning sub-minimum wages. We now attempt to use a more numerical approach in order to measure the lack of enforcement of minimum wage legislation in the South African labour market. We use a family of violation indices introduced in Bhorat, Kanbur and Mayet (2010a), which has the following form:

$$V_a = E\{[(w^m - w)/w^m]^\alpha\}$$

where w denotes wage, w^m denotes the relevant minimum wage, α is an index that emphasizes concern on the depth of violation, and E is the expectation operator with respect to the wage distribution in the sector to which w^m applies. This family is analogous to the family of poverty indices introduced by Foster, Greer and Thorbecke (1984). When $\alpha = 0$, the index collapses to the standard measure of violation—the percentage of covered workers earning sub-minimum wages. When $\alpha = 1$, the index captures the depth of violation. As α increases, more and more weight is put on larger violations. We use $\alpha = 2$ to capture this perspective, referring to this measure as the severity of violation.

Below we present estimates of V_a in an attempt at being more rigorous in our measure of compliance with these sectoral minima by employers in South Africa. Using the LFS for September 2007 then, V_0 represents the fraction of individuals earning below the minimum, that is, when $a = 0$. V_1 , as noted above, provides a measure of how far below the minima an individual earns, and is a measure of the extent and depth of violation (or lack of compliance) amongst South African employers. Increasing the value of the parameter a to 2 yields V_2 , the squared wage gap, and this serves, as noted above, as a measure of the severity of violation.

Table 1 below reports estimates of V_0 , along with the ratio of V_1 to V_0 for 2007. Whilst V_0 measures the percentage of workers violated, that is, earning below the minimum, the ratio (V_1/V_0) allows for the interpretation of V_1 , since it denotes the percentage shortfall of the average wage of violated workers from the minimum wage. Put differently, violated workers in this sample are earning on average (V_1/V_0) below the relevant minima.

The estimates in the last row of Table 1 show that in South Africa V_0 was 44% in 2007. This means that in 2007, 44% of employees were violated and receiving sub-minimum wages. The estimate for V_1 was 0.15 in 2007, whilst the ratio (V_1/V_0) was 0.35, indicating that non-complying employers paid wages that were on average 36% short of the legislative minima in that year.

The headline result here is that absolute levels of violation in South Africa are disturbingly high, both in terms of the percentage of individuals violated as well as the distance of the wages of these individuals from the minima. Indeed, in many sectors, V_0 soars to over 50%, a deeply worrying result. The high estimates for V_0 are reflective of a significant number of employers in South Africa who are violating minimum wage laws across all sectoral determinations. Violation rates vary from a low of 9% in the Civil Engineering sector to a high of 67% among Security workers.

TABLE 1: Estimates of violation in South Africa, 2007

SECTORAL DETERMINATION	V_0	V_1	V_1/V_0
RETAIL SECTOR MANAGERS AREA A	0.16	0.04	0.26
RETAIL SECTOR MANAGERS AREA B	0.08	0.03	0.37
RETAIL SECTOR MANAGERS AREA C	0.36	0.14	0.38
RETAIL SECTOR CLERKS AREA A	0.30	0.09	0.30
RETAIL SECTOR CLERKS AREA B	0.23	0.09	0.39
RETAIL SECTOR CLERKS AREA C	0.32	0.11	0.35
RETAIL SECTOR SALES ASSISTANT AREA A	0.34	0.18	0.53
RETAIL SECTOR SALES ASSISTANT AREA B	0.62	0.44	0.71
RETAIL SECTOR SALES ASSISTANT AREA C	0.38	0.27	0.70
RETAIL SECTOR SHOP ASSISTANT AREA A	0.41	0.10	0.25
RETAIL SECTOR SHOP ASSISTANT AREA B	0.53	0.22	0.40
RETAIL SECTOR SHOP ASSISTANT AREA C	0.54	0.23	0.43
RETAIL SECTOR DRIVERS AREA A	0.17	0.04	0.25
RETAIL SECTOR DRIVERS AREA B	0.49	0.15	0.31
RETAIL SECTOR DRIVERS AREA C	0.23	0.11	0.47
RETAIL SECTOR FORKLIFT OPERATORS AREA A*	0.65	0.15	0.23
RETAIL SECTOR SECURITY GUARDS AREA A	0.33	0.15	0.47
RETAIL SECTOR SECURITY GUARDS AREA B	0.30	0.16	0.54
RETAIL SECTOR SECURITY GUARDS AREA C	0.54	0.30	0.55
RETAIL SECTOR CASHIERS AREA A	0.52	0.18	0.34
RETAIL SECTOR CASHIERS AREA B	0.64	0.23	0.36
RETAIL SECTOR CASHIERS AREA C	0.68	0.30	0.44
RETAIL SECTOR	0.34	0.12	0.36

DOMESTIC WORKERS AREA A	0.31	0.09	0.28
DOMESTIC WORKERS AREA B & C	0.51	0.19	0.38
DOMESTIC WORKERS	0.39	0.13	0.33
FARM WORKERS AREA A	0.40	0.09	0.24
FARM WORKERS AREA B & C	0.65	0.21	0.33
FARM WORKERS	0.55	0.16	0.30
FORESTRY ALL WORKERS	0.53	0.16	0.29
TAXI OPERATORS DRIVERS	0.45	0.18	0.39
TAXI OPERATORS FARE COLLECTOR	0.88	0.54	0.62
TAXI OPERATORS	0.47	0.19	0.40
SECTORAL DETERMINATION	V_0	V_1	V_1/V_0
SECURITY WORKERS AREA 1	0.69	0.29	0.42
SECURITY WORKERS AREA 2	0.46	0.19	0.42
SECURITY WORKERS AREA 3	0.10	0.08	0.87
SECURITY WORKERS AREA 4	0.67	0.25	0.38
SECURITY WORKERS AREA 5	0.66	0.27	0.41
SECURITY WORKERS	0.67	0.28	0.42
HOSPITALITY SMALL FIRMS	0.35	0.15	0.42
HOSPITALITY MED-LARGE FIRMS	0.31	0.09	0.29
HOSPITALITY WORKERS	0.32	0.11	0.33
CONTRACT CLEANING AREA 1	0.48	0.17	0.35
CONTRACT CLEANING AREA 2A	0.38	0.13	0.34
CONTRACT CLEANING AREA 2B	0.40	0.14	0.35
CONTRACT CLEANING AREA 3	0.32	0.13	0.39
CONTRACT CLEANERS	0.40	0.15	0.36
CIVIL ENGINEERING AREA 1	0.09	0.04	0.49
CIVIL ENGINEERING AREA 2	0.08	0.01	0.16
CIVIL ENGINEERING	0.09	0.04	0.42
TOTAL	0.44	0.15	0.35

SOURCE: Authors' calculations using LFS September 2007 (StatsSA) and ECC sectoral determinations.

*indicates insufficient sample for estimation of violation index.

Interestingly, the occupations regarded as possibly the two lowest paid in the South African economy, namely farm workers and household domestic workers, yield differential outcomes for compliance with minimum wage laws. In the latter case the share below the minima, at 39%, is in fact below the national average. In contrast, the estimate for farm workers is significantly higher, as 55% of all these workers earn below the minimum wage. In addition, our V_1 estimates show a similar discrepancy. Interestingly though, the average distance below the minimum wage, despite the share difference, is very similar in both these occupations.

The Civil Engineering results are indicative also of the importance and relevance of measuring not only the share of individual workers below a stipulated minimum (V_0) but also the depth of this violation (V_1). Hence, whilst the share of these workers below the sector minimum is the lowest in the sample of covered workers,

those below the minimum were in fact relatively the worst off: violated Civil Engineering employees were 42% below the stipulated minimum, the highest within the sample. This result in particular, illustrates the importance and policy relevance of this integrated measure of violation. It suggests that when measuring minimum wage enforcement in any individual country setting, it is both the share below the minima and the distance below the minima of the violated, which is critical for understanding the impact of minimum wage policy in an economy.

Finally, consider the measure V_2 which squares the depth of violation before aggregating across violated workers. The absolute numerical value of V_2 does not have a meaning, but its ranking across sectors is interesting. Looking across the 9 sectors, while the sectors with the highest and lowest values of V_1 and V_2 are the same, the ranks are different, for example, for Forestry Workers or Contract Cleaners. On the depth of violation (V_1) Forestry Workers rank higher, but on severity of violation (V_2) the ranks are reversed. And the answer is different yet again for the V_0 measure. Thus the overall degree of violation is high in South Africa, but the nature of the violation—level, depth, severity—varies across sectors.

4. CONCLUSION

The results in this paper are an important value-added to previous research on enforcement of minimum wages in developing countries, and constitute, as far as the authors are aware, the first attempt to empirically estimate the effect of government enforcement on compliance with minimum wage legislation in South Africa for its various sectors. Analysis of the minimum wage regulatory environment in South Africa, as measured by the level, depth and severity of violation of minimum wages (violation indices V_0 , V_1 , and V_2 respectively), reveals that non-compliance levels of employers in the country with minimum wages are disturbingly high, with the overall level of violation reaching just under 45% in 2007. Non-compliance is highest within the Security sector, with worryingly high estimates reaching nearly 70% in some areas in 2007, followed by the farm and forestry sectors (55% and 53% respectively). Furthermore, occupation as well as the location of employment matters in the level and depth of violation observed. These quantifications should provide a more solid basis for the South African debate on levels and enforcement of minimum wages.

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APPENDIX**APPENDIX 1: Sectoral Determinations in South Africa**

SECTORAL DETERMINATION	OCCUPATION	AREA TYPES	HOURS PER WEEK	FIRM SIZE
FARM WORKERS	N/A	A and B	N/A	N/A
DOMESTIC WORKERS	N/A	A and B	> 27 hours	N/A
			< 27 hours	N/A
FARM WORKERS	N/A	A and B	N/A	N/A
TAXI WORKERS	Driver	N/A	N/A	N/A
	Fare Collector	N/A	N/A	N/A
PRIVATE SECURITY	N/A	A, B, C, D, and E	N/A	N/A
RETAIL SECTOR WORKERS	Managers	A, B, and C	N/A	N/A
	Clerks	A, B, and C	N/A	N/A
	Sales Workers	A, B, and C	N/A	N/A
	Shop Assistants	A, B, and C	N/A	N/A
	Drivers	A, B, and C	N/A	N/A
	Forklift Operators	A, B, and C	N/A	N/A
	Security	A, B, and C	N/A	N/A
	Cashiers	A, B, and C	N/A	N/A
CONTRACT CLEANERS	N/A	1,2 and 3	N/A	N/A
FORESTRY WORKERS	N/A	N/A	N/A	N/A
HOSPITALITY WORKERS	N/A	N/A	N/A	Small (<10 employees)
				Large (>10 employees)
CIVIL ENGINEERS	N/A	A and B	N/A	N/A