

## Impact of demographic variables on workplace surveillance levels amongst a sample of public service employees in Zimbabwe

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### ABSTRACT

**Orientation:** The study is located in an organisation responsible for the administration of the Zimbabwean border posts. The nature of its business calls for the use of surveillance to curb criminal activities.

**Research Purpose:** The study examines how the workplace surveillance affect employees basing on their demographic differences.

**Motivation of the Study:** Smuggling is rife at Zimbabwe border posts depriving the state of the revenue while exposing the civil society to smuggled goods. The use of workplace surveillance is critical in managing such illegal activities but the employer needs not to infringe employee rights to privacy.

**Research Design, Approach and Method:** The research follow a survey research design, and a quantitative research approach using a positivism research philosophy. Data collection amongst a sample of 364 respondents was possible through Survey Monkey. Data analysis comprised of descriptive and inferential statistics. In particular, the study utilised Shapiro-Wilk and Kruskal Wallis tests.

**Main Findings:** The study found that demographic variables that have an impact on workplace surveillance are employee age, education and computer use experience while gender, work experience, work role, and time spent on internet do not.

**Practical/Managerial Implications:** The employer needs to understand that employees appreciate the business importance of workplace surveillance and there is need to involve them in such decisions. Management also needs to ensure that such surveillance does not thwart employee privacy rights.

**Contribution or value-add:** The study contributes to the body of knowledge by noting that that employee age, education and computer use experience demographic variables have an impact on workplace surveillance while gender, work experience, work role, and time spent on internet do not.

### KEYWORDS

Kruskal Wallis, workplace surveillance, demographic variables

## 1. Introduction

This research examines how employees react to workplace surveillance in relation to their demographic variables among Zimbabwe Revenue Authority (ZIMRA) employees. Whenever there is an employment contract, employees monitoring is inevitable, and with the coming into being of modern technology, workplace surveillance is on the rise (Steinfeld, 2017). Rosenblat, Kneese and Danah (2014) note that employers need to invest in workplace surveillance to reduce pilferage, increase productivity, and avoid leakage of confidential information. Moussa (2015) reiterates that employees react differently to such surveillance depending on their demographic variables, and their reaction has an impact on the performance of the organisation. It is critical to know that workplace surveillance could pose some negative effects on employees if consultation and implementation exclude them.

## 2. Background to the study

According to ZIMRA (2016) the authority had installed surveillance cameras worth USD\$600 000.00 at Beitbridge border post in 2016. The investment is giving expected results following continued catching of the fraudsters, and some ZIMRA officials undertaking illegal acts. Such control of illegal acts echoes the company's civil protection mandate. Such an investment justifies the investment regardless of potential employee rights challenges. The civil society vulnerable to these illegal acts like smuggling, and corruption while the same acts deprive ZIMRA's contribution to the fiscus justifying the need for workplace surveillance. Ncube (2016) reiterate that it is critical to analyse and evaluate the impact of workplace surveillance on employees lest their morale suffers.

According to ZIMRA (2018), the Commissioner General (at the time of the study), Ms Faith Mazani, has a strategy that hinges on the four 'Ps', namely *partnerships, projects, processes* and *people*. Regarding the *processes*, the commissioner noted that she seeks to enhance and intensify the current, and new systems, so that they become unsusceptible to fraud and corruption. She added that the existing surveillance cameras, electronic cargo tracking system, e-services and Automated System for Customs Duty (ASYCUDA) world platform, among others, are her priorities. The authority regard hotlines as a key tool in surveillance against corruption and fraud as they allow reporting of such acts with maximum anonymity (Kazunga, 2018). Munyuki (2017) had earlier on emphasised the need for the authority to continue improving their surveillance system and stay ahead of fraudster plans.

Ncube (2016) noted that ZIMRA introduced an electric cargo system to monitor the movement of people and goods at the border posts but regardless of this new system, some young ZIMRA officials have already devised ways of circumventing it. This shows that employees react negatively to such surveillance depending on their demographic differences. According to Huni (2016), the Government of Zimbabwe appointed a team headed by the Minister of Home Affairs aimed at improving surveillance and curbing smuggling at all the border posts. Mhlanga (2017) reiterated that the team was put in place because 50% in revenue was being lost through underhand activities at entry border points. ZIMRA (2016) revealed that the data gathered by the Ministry of Home Affairs reveals that the involvement of ZIMRA's border posts employees in these underhand activities is massive, and hence, the need to install surveillance cameras at the border posts.

Huni (2016) said that many questions on the reasons why the revenue collections kept going down at border posts were coming up. The questions were popping because a lot of imports, and exports, were taking place at the border posts yet revenue continued declining. Mhlanga (2017) reiterated that the Minister of Home Affairs is on record for stating that the Government of Zimbabwe is investing US\$4 million in surveillance measures at all border posts aimed at curbing all underhand activities that are depriving the state of revenue. Langa (2017) noted that ZIMRA is under immense pressure to contribute to the fiscus and such a contribution may remain elusive, hence, the dire need to have workplace surveillance at the border posts. Briefly, the literature referred to in the above sections emphasises the urgent need for ZIMRA to identify various workplace surveillance initiatives aimed at curbing corruption, smuggling and

all other underhand activities. In this regard, it is necessary to conduct research on how employee demographic variables affect employee reaction towards workplace surveillance system.

### **3. Employee gender and workplace surveillance**

This section reviews literature on the research constructs. The literature assists the research in coming up with the study hypotheses.

#### *Employee gender and workplace surveillance*

Gichuhi, Ngari and Senaji (2016) reiterates that the rate at which modern technology is evolving calls for organisations to be concerned about their operational privacy and security. According to Bressler and Bressler (2014), organisations need to protect their image against all odds and some organisations put workplace surveillance for this reason. In enforcing such surveillance practices, management needs to consider how employees react to such surveillance. In most cases, men do not like working under surveillance as compared to women (Bressler & Bressler, 2014). According to Griffin (2012) all organisational controls, and systems must be a policy issue and such policies need to consider employee input. Such procedures and policies set employee targets and objectives for conduct, and productivity purposes. Gichuhi et al. (2016) conclude that female employees are mostly honest at work and they positively react to workplace surveillance as opposed to men. The above literature shows that an expectation that workplace surveillance negatively relates to employee gender is possible, hence the following null hypothesis.

1. *H<sub>0</sub>: There is no difference in employee surveillance between male and female public servants in Zimbabwe.*

#### *Employee age and workplace surveillance*

Research conducted in Kenya by Gichuhi et al. (2016) conclude that the younger generation do not like working under surveillance because they like space and freedom when compared to the older generation. In the same study, cases of young employees dodging cameras were recorded and disciplinary action taken. On the same note, Chen and Ross (2007) concluded that older people are usually honest in their dealings and they do not mind working under surveillance. Younger people are the ones that complain a lot about rights and privacy infringements when compared to older employees (Reilly, 2010). The above literature shows that it can be expected that workplace surveillance negatively relates to employee age, hence the formulation of the following null hypothesis.

2. *H<sub>0</sub>: There is no difference between employee surveillance levels and age of public servants in Zimbabwe.*

#### *Employee education and workplace surveillance*

Research by Zuboff (2015) found that the well-known associations with surveillance are the CCTV cameras at public places like workplaces, highways, and airports. The research also found that highly educated employees seem to appreciate that workplace surveillance is for monitoring business against cyber risks, and pilferage. However, the same study found that the less educated employees felt that such surveillance is a management victimisation tool. Tomczak, Lanzo, and Aguinis (2018) reckoned that around 80% of organisations in the USA use various forms of workplace surveillance with much usage being that of electronic monitoring. Some organisations use global positioning system (GPS) surveillance tracking devices, while some use security cameras. The educated employees liked the surveillance system because it assists them in getting reliable source of performance appraisal (Tomczak et al., 2018).

The research by Esmark, Noble, and Breazeale (2017) in the Indian retail industry found that when shoppers are under surveillance, they can either temporarily, and or permanently, leave the shop because they do not like such surveillance. Research by Esmark et al. (2017) concluded that the reactance theory explains how highly educated employees advocate for the use of workplace surveillance. Zuboff (2015) notes that most educated employees provide management possible solutions on how, and where, to install the surveillance cameras. The above literature has shown that it is possible to expect that workplace surveillance positively relate to employee education, hence the following null hypothesis.

3. *H<sub>0</sub>: There is no difference between employee surveillance level and education of public servants in Zimbabwe.*

### *Employee work experience and workplace surveillance*

A study by Reilly (2010) show that employees react differently to workplace surveillance depending on their work experience. Reilly (2010) add that the less experienced employees do not like working under such surveillance as they feel it makes them panic, and nervous, as opposed to experienced employees. A study conducted in Kenya by Gikandi and Bloor (2010) noted that new employees felt intimidated by workplace surveillance noting that it does not give them room to make mistakes while the highly experienced employees felt that such surveillance shows that management does not trust them considering the length of service they had. Gichuhi et al. (2016) add that the long serving employees feel mistrusted when subjected to workplace surveillance in view of the years they have been loyal to the organisation. The above literature has shown that it could be possible to conclude that workplace surveillance negatively relates to employee experience, hence formulation of the following null hypothesis:

4. *H<sub>0</sub>: There is no difference between employee surveillance levels and work experience of public servants in Zimbabwe.*

### *Employee position and workplace surveillance*

It is Tsakanikas and Dagiuklas' (2017) contention that the evolution of surveillance technology dates back to the 1960s when Closed Circuit Television (CCTV) was doing indoor activity surveillance. Despite recording challenges, the systems gained a lot of confidence from the market, and uptake was more in banks, supermarkets, fuelling stations, and football stadiums, among others. The research by Tsakanikas and Dagiuklas (2017) found that senior managers did not feel threatened by workplace surveillance because they participated in the installation of such systems while the opposite prevailed for junior employees who felt that their exclusion from the development, and implementation of the systems was a deliberate move by management. Mayer, Viviers and Tonelli (2017) contend that both senior and junior employees were raising cases of employee dissatisfaction regarding privacy. Mayer et al. (2017) found that general workers were avoiding the cameras during their work execution while some directors argue against the use of electronic surveillance noting that it violates human rights. The above literature show that it is possible to expect that workplace surveillance negatively relate to employee position at work, hence the formulation of the following null hypothesis:

5. *H<sub>0</sub>: There is no difference in employee surveillance level and work role of public servants in Zimbabwe.*

**Employee computer experience and workplace surveillance**

Research by Kardas and Cicekli (2017) found that employees with much experience in using computers were not comfortable working under electronic surveillance. The study also revealed that even the employees who were less experienced in using computers became fond of using the computers the moment they discovered that management was subjecting them to electronic surveillance. Few cases (Esmark et al., 2017; Qureshi & Syed, 2014) found that there was no relationship between employee experience in using computers and workplace surveillance. A study by Tsakanikas and Dagiuklas (2017) found that both employees with experience in using computers, and those who were not, did not want workplace surveillance. The above literature show that it is possible to expect that workplace surveillance negatively relate to employee experience in using computers at work, hence the formulation of the following null hypothesis.

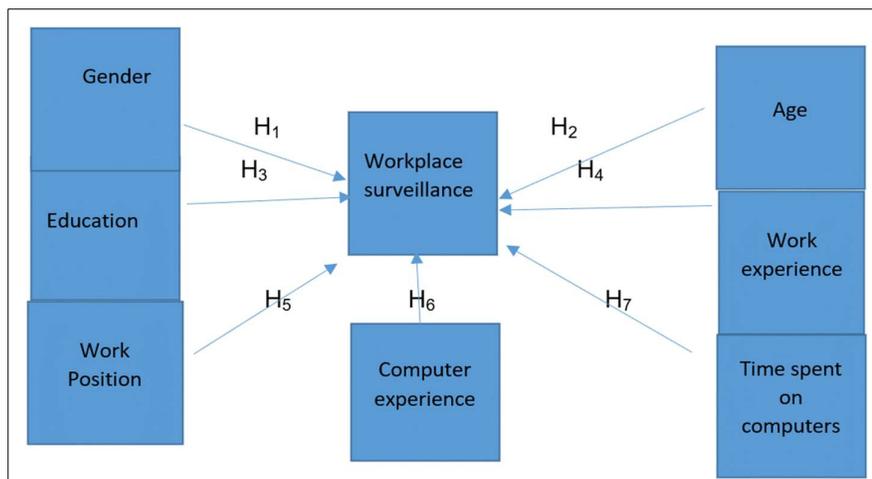
- 6. *H<sub>0</sub>: There is no difference between employee surveillance and computer experience of public servants in Zimbabwe.*

**Employee time spent on internet and workplace surveillance**

Research by Esmark et al. (2017) noted that employees who spend much of their time online for both work, and personal business, do not like workplace surveillance. This was so because of the nature of their work, which is easy to subject to electronic surveillance. Pavone, Ball, Esposti, Dibb, and Santiago-Gómez (2017) added that employees who use computers for online duties are prone to such surveillance, and those who spend more time online do not like such surveillance as opposed to those who spend less time online. Research by Shamim, Cang, and Yu (2017) concluded that some employees reckon that there is no need to continue working online when they are always under workplace surveillance. The study found that some employees encouraged the workmates to use their personal laptops to do office business just to avoid workplace online surveillance. The above literature show that it is possible that workplace surveillance negatively relates to the amount of time the employee spent on internet at work, hence the following hypothesis.

- 7. *H<sub>0</sub>: There is no difference between employee surveillance and computer experience of public servants in Zimbabwe.*

Figure 1 below depicts a model of the relationship between demographic variables and workplace surveillance.



#### 4. Methodology

This study adopted a survey research design following a positivist research paradigm, which is quantitative and descriptive in nature. This paradigm enables production of information and data that is replicable over a long period hence the decision to use it.

##### *Research participants*

The total population for the study comprised of ZIMRA employees based at Zimbabwe's ten main border posts whose overall population size was 4 000. Yamani's (1964) formula, which assists in attaining high accuracy, gave 364 as the sample size for the study.

##### *Sampling approach*

Ten border posts were at the centre of this research, and a census approach was critical in helping the study to avoid bias tendencies while ensuring representativeness. Stratified random sampling was useful in determining the number of respondents per border post while making sure that the sample size is proportionate to the total population size.

##### *Data collection and analysis procedure*

Prior to data collection, the researcher sought for ethical clearance through the University of Fort Hare Research Ethics Committee. The researcher applied for research permission from ZIMRA management. The respondents were advised not to include their personal details on the questionnaire for anonymity purposes. The objectives, and consent form were detailed in a letter that accompanied the questionnaire via SurveyMonkey. To ascertain if respondents will face any difficulties in responding to the questionnaire, the questionnaire was subjected to a pilot study. Stratified random sampling was adopted in identifying pilot study respondents and 26 participated in the pilot study distributed across all main border posts. Data collection was done using SurveyMonkey while the analysis utilised statistical inference namely Shapiro-Wilk and Kruskal Wallis tests.

#### 5. Findings

The study investigated the impact of demographic variables on employee surveillance amongst a sample of public servants in Zimbabwe. The demographic variables used comprise of gender, age, education, work experience, work role, computer experience and time spent on the internet. As such, the above seven null hypotheses were investigated. To carry out the tests, the study investigated the data for normality which is the underlying assumption of most parametric tests as they require that the dependent variable be approximately normally distributed for each category of the independent variable. For normally distributed data, parametric tests are preferred because they tend to be more accurate. However, in the case were the data fails the normality test, non-parametric can be relied on.

##### **Hypothesis 1**

*H<sub>0</sub>: There is no difference between employee's level of surveillance between male and female public servants in Zimbabwe.*

Table 1 below shows Shapiro-Wilk test statistics

**Normality Tests**

Table 1: Normality Tests

Gender		Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
Surveillance	male	.155	187	.000	.928	187	.000
	female	.192	138	.000	.881	138	.000

- a. Lilliefors Significance Correction
- b. Surveillance is constant when Gender = 3. It has been omitted.
- c. Surveillance is constant when Gender = 5. It has been omitted.

The normality test results as depicted in Table 1 show that the Shapiro-Wilk test statistics for both male and female employees had *p*-values less than 5%, (Shapiro & Wilk, 1965; Razali & Wah, 2011) and a visual inspection of their histograms, normal Q-Q plots and box plots showed that employee surveillance was not normally distributed for both males and females. As such, we continue with the Kruskal-Wallis H Test to investigate the hypothesis. The results are tabulated in table 2 and 3.

Table 2: Ranks

	Gender	N	Mean Rank
Workplace Surveillance	Male	187	164.80
	Female	138	160.55
	Total	325	

Table 3: Test Statistics

Employee Surveillance	
Chi-Square	0.171
Df	1
Asymp. Sig.	0.680
a. Kruskal Wallis Test, b. Grouping Variable: Gender	

As shown in Tables 2 and 3, the Kruskal-Wallis H test showed that there was no statistically significant difference in employee level of surveillance between male and female workers,  $\chi^2(1) = 0.171, p = 0.680$ .

**Hypothesis 2**

*H<sub>0</sub>: There is no difference between employee surveillance level and age of public servants in Zimbabwe.*

Tables 4 show the results of the normality tests for the dependent variable: workplace surveillance and independent variable – employees’ ages.

Table 4: Shapiro Wilk

Age	Kolmogorov-Smirnova			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
Surveillanc e	26-30 yrs.	.381	26	.000	.622	26	.000
	31-40 yrs.	.215	113	.000	.900	113	.000
	41-50 yrs.	.234	121	.000	.807	121	.000
	50+ yrs.	.292	67	.000	.838	67	.000

a. Lilliefors Significance Correction

As indicated in Table 4, all the Shapiro Wilk's test's p-values were less than 0.05 and a visual inspection of their corresponding histograms, normal Q-Q plots and box plots show that surveillance was not normally distributed for all the age groups as shown in table 4 above. To investigate the impact of age on employee surveillance, the Kruskal-Wallis H Test was used and the results are tabulated in table 5 and 6.

Table 5: Ranks

	Age	N	Mean Rank
Workplace Surveillance	26-30 yrs.	26	249.52
	31-40 yrs.	113	136
	41-50 yrs.	121	178.15
	50+ yrs.	67	152.49
	Total	327	

Table 6: Test Statistics

	Workplace Surveillance
Chi-Square	36.606
df	3
Asymp. Sig.	0.000

a. Kruskal Wallis Test, b. Grouping Variable: Age

As shown in Tables 5 and 6 above, the Kruskal-Wallis H test had a  $\chi^2(3) = 36.606$ , with  $p = 0.000 (<0.05)$ . As such, we conclude based on this result that there was statistically significant difference in levels of workplace surveillance among the different age groups of the surveyed government workers.

### Hypothesis 3

*H<sub>0</sub>: There is no difference between level of employee surveillance and their level of education of public servants in Zimbabwe.*

Tables 7 shows the results of the Shapiro Wilk tests for the dependent variable: workplace surveillance and independent variable – employees' education.

Table 7: Test of Normality

Education		Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Surveillance	A-level	.260	2	.			
	Diploma/Certificate	.256	44	.000	.834	44	.000
	Bachelor's Degree	.188	136	.000	.921	136	.000
	Honour's Degree	.222	135	.000	.870	135	.000
	Master's Degree	.282	10	.024	.836	10	.040

a. Lilliefors Significance Correction

The Shapiro Wilk's test's *p*-values were all less than 0.05 for all the three education levels. An additional visual inspection of the education level's histograms, normal Q-Q plots and box plots showed that employee surveillance was not normally distributed for all the first three levels of education and as such we proceed with the use of the Kruskal-Wallis H Test to investigate our hypothesis.

Table 8: Ranks

Education		N	Mean Rank
Employee Surveillance	A-level	2	136.75
	Diploma/Certificate	44	227.12
	Bachelor's Degree	136	166.71
	Honour's Degree	135	147.76
	Master's Degree	10	74.15
Total		327	

Table 9: Test Statistics

Employee Surveillance	
Chi-Square	34.526
Df	4
Asymp. Sig.	.001

a. Kruskal Wallis Test, b. Grouping Variable: Education

Tables 8 and 9 show the Kruskal-Wallis H test results. The Chi-Square -  $\chi^2(4)$  value was 34.926 with a corresponding *p*-value of 0.001 (<0.05). As such, conclusions are made based on this result that there were statistically significant differences in workplace surveillance among the different employees based on their educational backgrounds.

### Hypothesis 4

*H<sub>0</sub>: There is no difference between employee surveillance levels and work experience of public servants in Zimbabwe.*

In Table 10 are results of the Shapiro Wilky tests for the dependent variable: workplace surveillance and independent variable – employees' experience.

Table 10: Test Statistics

	Experience	Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Surveillance	1<x<3 yrs.	.286	6	.136	.755	6	.022
	3<x<5 yrs.	.204	51	.000	.889	51	.000
	5<x<7 yrs.	.204	127	.000	.892	127	.000
	7+ yrs.	.143	143	.000	.929	143	.000

a. Lilliefors Significance Correction

The Shapiro Wilk's test *p*-values were less than 0.05 for all the four levels of experience greater than 1 year. Only for experience less than a year the *p*-values were omitted. In addition to the *p*-values, employee experience's histograms normal Q-Q plots and box plots showed that employee surveillance was not normally distributed with the levels of experience the employees have. As such, the Kruskal-Wallis H Test was, as such, used to test the hypothesis. Tables 11 and 12 show the Kruskal -Wallis H test ranking, and test statistics results.

Table 11: Ranks

	Experience	N	Mean Rank
Employee Surveillance	1<x<3 yrs.	6	115.42
	3<x<5 yrs.	51	156.86
	5<x<7 yrs.	127	158.29
	7+ yrs.	143	173.66
	Total	327	

Table 12: Test Statistics

	Workplace Surveillance
Chi-Square	4.019
df	3
Asymp. Sig.	.259

a. Kruskal Wallis Test,  
b. Grouping Variable: Experience

Tables 11 and 12 show the Kruskal -Wallis H test ranking and test statistics results. The Chi-Square -  $\chi^2(3)$  value was 4.019 with a corresponding *p*-value of 0.259 (>0.05). As such, we conclude that there was no statistically significant difference in employee level of surveillance and their different levels of experience.

### Hypothesis 5

H<sub>0</sub>: There is no difference in employee surveillance level and work role of public servants in Zimbabwe.

Table 13: Normality Tests

Role		Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Surveillance	Manager	.208	14	.103	.917	14	.202
	Supervisor	.207	35	.001	.912	35	.008
	Officer	.141	189	.000	.929	189	.000
	Workers Union Rep	.229	85	.000	.844	85	.000
	Other	.364	4	.	.840	4	.195

a. Lilliefors Significance Correction

Table 13 shows the results of the normality tests. The Shapiro Wilk's *p*-values were less than 0.05 for three roles – supervisor, officer and worker's union representative. The others had *p*-values greater than 5%. In addition, a visual inspection of the associated histograms, normal Q-Q plots, and box plots showed that employee surveillance was not normally distributed for all the different roles shown in Table 13 above. To investigate the impact of employee role on their levels of surveillance, the Kruskal-Wallis H Test was used, and the results are tabulated below.

Table 14: Ranks

Experience		N	Mean Rank
Workplace Surveillance	1<x<3 yrs.	14	160.75
	3<x<5 yrs.	35	171.41
	5<x<7 yrs.	189	167.4
	7+ yrs.	85	157.05
	Total	4	97.62

Table 15: Test Statistics

Workplace Surveillance	
Chi-Square	3.050
Df	4
Asymp. Sig.	.549

a. Kruskal Wallis Test

b. Grouping Variable: Experience

Tables 14 and 15 show the Kruskal-Wallis H test ranking and test statistics results. The Chi-Square -  $\chi^2(4)$  value was 3.050 with a corresponding *p*-value of 0.549 (>0.05). As such, we conclude that there was no statistically significant difference in level of workplace surveillance and employee roles.

### Hypothesis 6

*H<sub>0</sub>: There is no difference between employee surveillance and computer use experience of public servants in Zimbabwe*

Table 16: Normality Tests

A7Computer Experience	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Surveillance 0 to 5 yrs.	.165	64	.000	.919	64	.000
6 to 10 yrs.	.194	136	.000	.906	136	.000
11 to 15 yrs.	.292	94	.000	.821	94	.000
16 to 20 yrs.	.174	33	.013	.910	33	.010

a. Lilliefors Significance Correction

In Table 16, we present the results of the normality tests. The Shapiro Wilk's *p*-values were all less than 0.05 and a visual inspection of the associated histograms, normal Q-Q plots and box plots showed that workplace surveillance was not normally distributed for the different years of employee computer experience. To investigate the impact of employee role on their levels of surveillance, the Kruskal-Wallis H Test was used and the results are tabulated below.

Table 17: Ranks

Computer use Experience	N	Mean Rank
workplace Surveillance 0 to 5 yrs.	64	183.29
6 to 10 yrs.	136	167.85
11 to 15 yrs.	94	132.19
16 to 20 yrs.	33	201.36
Total	327	

Table 18: Test Statistics

	Employee Surveillance
Chi-Square	19.606
Df	3
Asymp. Sig.	.001

a. Kruskal Wallis Test

b. Grouping Variable: A7CompExperience

Tables 17 and 18 show the Kruskal-Wallis H test ranking and test statistics results. The Chi-Square -  $\chi^2$  (3) value was 19.606 with a corresponding *p*-value of 0.000 (<0.05). As such, we conclude that there was statistically significant difference in employee surveillance levels and their computer use experience.

**Hypothesis 7**

*H<sub>0</sub>: There is no difference between employee surveillance levels and time spent on the internet of public servants in Zimbabwe.*

Table 19: Normality Tests

	A9TimeSpent	Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Surveillance	21 to 40%	.206	33	.001	.916	33	.014
	41 to 60%	.171	96	.000	.904	96	.000
	61 to 80%	.168	141	.000	.923	141	.000
	81 to 100%	.203	56	.000	.885	56	.000

a. Lilliefors Significance Correction

b. Surveillance is constant when A9TimeSpent = 0 to 20%. It has been omitted.

Table 19 shows the normality test results. The Shapiro Wilk's test had *p*-value less than 0.05 and a visual inspection of the corresponding histograms, normal Q-Q plots and box plots showed that employee surveillance was not normally distributed for the different times spent on internet by the surveyed employees. Thus, to investigate whether employee computer use experience has any impact on their level of surveillance, we proceed to make use of the Kruskal-Wallis H Test. The results are tabulated in Tables 20 and 21.

Table 20: Ranks

	A9TimeSpent	N	Mean Rank
Employee Surveillance	0 to 20%	1	98.5
	21 to 40%	33	177.79
	41 to 60%	96	148.59
	61 to 80%	141	163.13
	81 to 100%	56	185.66
	Total	327	98.5

Table 21: Test Statistics

	Workplace Surveillance
Chi-Square	7.013
Df	4
Asymp. Sig.	.135

a. Kruskal Wallis Test

b. Grouping Variable: A9TimeSpent

The Kruskal-Wallis H test results as shown in Table 22 had a Chi-Square -  $\chi^2$  (4) value of 7.013 with a corresponding *p*-value of 0.135 (>0.05). As such, conclusions are made based on this result that there was no statistically significant difference in employees' surveillance levels, and their time spent on the internet.

## 6. Discussion

The research examined seven null hypotheses, and the first null hypothesis that there is no difference between employee's level of surveillance between male and female public servants in Zimbabwe. The Kruskal-Wallis H test showed that there was no statistically significant difference in employee level of surveillance between male, and female workers,  $\chi^2(1) = 0.171$ , *p* = 0.680. Based on this result, the study accepts the null hypothesis. This result is in agreement with reviewed literature (Gichuhi et al., 2016; Bressler & Bressler, 2014; Griffin, 2012).

Secondly, the research examined a null hypothesis that there is no difference

between employee surveillance level and age of public servants in Zimbabwe. The Kruskal-Wallis H test had a  $\chi^2(3) = 36.606$ , with  $p = 0.000$  ( $<0.05$ ). As such, conclusions are made based on this result that there was statistically significant difference in levels of workplace surveillance among the different age groups of the surveyed workers. Based on this result, the study rejects the null hypothesis, and adopts the alternative one. This result is in agreement with reviewed literature (Reilly, 2010; Chen & Ross, 2007).

The third null hypothesis that the study test is that there is no difference between level of employee surveillance and their level of education of public servants in Zimbabwe. The Kruskal-Wallis H test results show that the Chi-Square -  $\chi^2(4)$  value was 34.926 with a corresponding  $p$ -value of 0.001 ( $<0.05$ ). As such, the study concludes that there were statistically significant differences in workplace surveillance among the different employees based on their educational backgrounds. Based on this result, the study rejects the null hypothesis, and adopts the alternative one. This result is in agreement with reviewed literature (Zuboff, 2015; Tomczak et al., 2018; Esmark et al., 2017).

Furthermore, the study assessed a fourth null hypothesis, that there is no difference between workplace surveillance levels and work experience of public servants in Zimbabwe. The results show that the Chi-Square -  $\chi^2(3)$  value was 4.019 with a corresponding  $p$ -value of 0.259 ( $>0.05$ ). As such, the study concludes that there was no statistically significant difference in employee level of surveillance and their different levels of experience. Based on this result, the study accepts the null hypothesis. This result is in agreement with reviewed literature (Gikandi & Bloor, 2010; Gichuhi et al., 2016).

This study went on to test a fifth null hypothesis that there is no difference in employee surveillance level and work role of public servants in Zimbabwe. The results show that a Chi-Square -  $\chi^2(4)$  value was 3.050 with a corresponding  $p$ -value of 0.549 ( $>0.05$ ). As such, the study concludes that there was no statistically significant difference in level of employee surveillance and their roles. Based on this result, the study accepts the null hypothesis in line with previous reviewed literature (Tsakanikas & Dagiuklas, 2017; Mayer et al., 2017).

The paper sought to tests a sixth null hypothesis that there is no difference between employee surveillance and computer use experience of public servants in Zimbabwe. The results show that the Chi-Square -  $\chi^2(3)$  value was 19.606 with a corresponding  $p$ -value of 0.000 ( $<0.05$ ). As such, the study concludes that there was statistically significant difference in employee surveillance levels and their computer use experience. Based on this result, the study rejects the null hypothesis and adopts the alternative one. This finding is supported by literature (Kardas & Cicekli, 2017; Qureshi & Syed, 2014).

Lastly, the seventh null hypothesis that there is no difference between employee surveillance levels and time spent on the internet of public servants in Zimbabwe. The Kruskal-Wallis H test results had a Chi-Square -  $\chi^2(4)$  value of 7.013 with a corresponding  $p$ -value of 0.135 ( $>0.05$ ). As such, the study concludes that there was no statistically significant difference in employees' surveillance levels and their time spent on the internet. Based on this, the null hypothesis is accepted as supported by reviewed literature (Pavone et al., 2017; Shamim et al., 2017).

#### *Practical implications of the study*

The research found that employee demographic variables have a significant relationship with workplace surveillance. The study noted that employees tolerate workplace surveillance if they know that it is not a management victimisation too. Based on this, management can invest much in workplace surveillance, and communicate with the employees the importance of such surveillance. This will protect business interests and maintain a positive industrial relations climate.

However, research also found that electronic workplace surveillance threatens employee privacy, hence rejection of  $H_2$ ,  $H_3$  and  $H_6$ . This calls for management to engage employees when deciding on investing in such tools. This will make it easy for employees to accept the surveillance following their participation in the installation of the same. Such consultations, and discussions with employees, will improve on employee trust, motivation, engagement, and ultimately high performance. This

follows that if employees appreciate the business importance of workplace surveillance, their levels of work motivation and engagement will rise.

### *Contribution*

The findings of this study contribute to the existing body of knowledge on workplace surveillance and employee demographic variables. Where most previous researches directly focused on psychological impacts of workplace surveillance, this paper focused on how demographic variables impact on workplace surveillance. It is important to underline that most previous studies in workplace surveillance were carried out in the first, and second, world countries; this study bridges this gap and brings perspectives from Africa, and specifically Zimbabwe.

The study also contributes to the body of knowledge by noting that employee age, education and computer-use-experience demographic variables have an impact on workplace surveillance while gender, work experience, work role, and time spent on internet do not.

### *Limitations and recommendation for future study*

The first limitation is that the study focus was on workplace surveillance in general. The rapid growth in technology ushers in various tools for surveillance as such there is need for future research to focus on such specific surveillance tools brought by advancing technology.

Secondly, the study only explored the impact of a few demographic variables namely, employee work position, amount of time spent on internet, employee computer experience, employee role at work, employee work experience, employee education, employee age, and employee gender. Future studies can look at other demographic variables that were not alluded to by this study like employee income, ethnicity, race, culture, and marital status.

Thirdly, only ten border posts, and employees at these border posts were used in this study leaving out stations, and employees in cities and other small border posts. Future studies can accommodate these other border posts and employees who were not part of this study so as to give a comprehensive understanding, and interpretation of how employee motivation relates to employee demographic variables in public organisations in Zimbabwe.

## **7. Conclusions**

The study rejected  $H_2$ ,  $H_3$  and  $H_6$  showing that indeed, workplace surveillance negatively relates with employee demographic variables. A participatory approach to decision to install such surveillance is important for a harmonious industrial relations climate. Acceptance of  $H_1$ ,  $H_4$ ,  $H_5$  and  $H_7$  show that to some extent, workplace surveillance positively relates to employee demographic variables. This calls for continued monitoring of workplace environment to ensure that production is not disturbed.

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