Determinants of Effective Payroll Accounting Systems: Case of the Cameroon Public Sector

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Abstract. The main objective of the study was to examine the determinants of the effective public sector payroll accounting system in Cameroon. Four specific objectives were developed to assess the extent to which payroll audit practices, payroll computerisation, monitoring payroll controls, and payroll control environment determine the effectiveness of the public sector payroll accounting system. An exploratory research design was used. Data was drawn through a survey from a sample of 25 personnel of the Salaries and Pensions Department of the Ministry of Finance. The Ordinary Least Squares was used to do the analysis. The major findings were that payroll computerisation, payroll audit practice, and payroll monitoring positively and significantly affect the effectiveness of the public sector payroll accounting system in Cameroon. Consequently, the government of Cameroon should ensure periodic assessment of the public sector payroll computerisation system and act promptly to maintain, replace, or upgrade it; the payroll audit practices should be reactivated to carry out internal audits more purposefully to expose payroll errors and fraud in the course of their investigations; and that monitoring of payroll internal controls should be an operational activity by top level payroll personnel who should themselves demonstrate professional and exemplary character towards the maintenance of the system.

Key Words: payroll computerisation, audit practices, payroll controls, ghost workers

Introduction

An effective public sector payroll accounting system (EPSPAS) involves the identification, analysis, recording, and control of all the elements and transactions associated with employee compensation and deductions (Abdulah et al., 2013). It is a system where salaries and wages are not being overstated on the payroll, payroll costs are accurately calculated, and all paid employees truly exist and still working for the government. It is a system that complies with regulations relating to government payroll management.

In the last two decades many African countries try to improve the performance of their public sectors widely perceived to be plagued with corruption, weak accountability and transparency (Therkildsen, 2000; Lufunyo, 2013). These public sector reforms were categorised into three: performance management systems, restructuring of the public sector, and financial management reforms (Therkildsen, 2000; Rugumyamheto, 2005). Crucial in improving the quality of the public sector services is effective financial management (CIMA, 2010). Effective financial management gives assurance to the public that tax revenues are effectively put into use. A well-organized financial management system ensures that government funds are effectively and efficiently managed.

In this respect, any government that seeks to improve on its public sector financial management works hard to secure an effective public sector payroll accounting system given that payroll expenses usually constitute a very significant portion of government expenditure. In public sector administration salary payment is a pointer to effective and efficient public service performance (Jibrin, Ejura, & Nwaorgu, 2015).

The Cameroon public sector payroll accounting system is computerised in a bid to curb delays and financial irregularities that usually occur in the payroll accounting system. Workers' salaries, wages, and pensions are easily sent to banks from the government treasury for public sector workers to collect. Such an electronic payment structure enables the use of electronic fund transfers, electronic cash, credit cards, electronic billing, automated teller machines, and others. In an effective computerised payroll system, employers input just the employee wage or salary information and hours and the payroll accounting software does the calculations and subtractions of withholdings automatically and also reminds employers when to file tax returns. Changes in the tax laws usually require an automatic update in the computer system (Rietsema, 2021).

Applicable salary and wage deductions may be voluntary or involuntary. Voluntary deductions comprise payments into pension, medical, and insurance schemes. Involuntary deductions may arise from garnishments or judgements that a third party pays money owing to a defendant directly to a plaintiff, and from union dues (Alaska Department of Labour and Workforce Development, 2021). The payroll employees keep record of goal amounts for some deductions, such as garnishments, philanthropic contributions, and loans in order to stop when the goal amounts are reached.

The Department of Personnel Salaries and Pensions in the Ministry of Finance is responsible for the production and maintenance of computer applications and personnel files in the Cameroon public sector relating to salaries and pensions. The payroll accounting system is centralised. Its responsibilities include the monitoring of personnel careers, development and preparation of staff training programmes, and handling of disciplinary, promotion and advancement files of the personnel. It also makes accounting entries of personnel allowances, bonuses, and family benefits. It examines duly approved personnel application files for pensions and annuities (Kingah, 2021). It studies and engages files for payment involving pensions of occupational accidents and diseases.

However, all of this is done using instruments such as Decree no. 74/694 of 29 July 1974 fixing the conditions for granting and the rates of overtime allowances to the personnel of various State Administrations; Decree no. 75/791 of 18 December 1975 fixing the index grading of the various Civil Servants; Decree no. 75/342 of 21st May 1975 establishing a technical allowance bonus to the benefit of certain civil servants, Decree no. 76/251 of 25 June 1975 granting a technical allowance bonus to some civil servants in the translation and interpretation services, and Decree no.78/472 of 03 November 1978 granting a monthly duty allowance to some personnel serving at the State Inspectorate General and at the Administrative Reform (DDPP, 2020).

There was a reform in the Cameroon public service called Payroll containment better known by its French acronym as Programme de la Réforme de la Fonction Publique Camerounaise. It was officially lunched on June 19, 1995. The main objective was to take stock of the number of civil servants, and to seek ways of improving the productivity of the civil service workers. With this objective, state agents in the civil service who could not be integrated in the reform process, or who were indiscipline were laid off in order to eliminate what was called overstaffing. The reforms were planned to end in 1997. These reforms were to address the key issues in the structural adjustment programs as proposed by the World Bank in 1994 in order to cut down the size of the civil service and improve the performance of the Cameroon civil service (Vito & Ludger, 1996).

Apart of removing ghost workers and state agents, there was enforcement of retirement regulations, the freezing of public service recruitment, eliminating of guaranteed rights containing wages and retrenchment. Retrenchments however, included "voluntary" departures from the civil service, and the dismissal of those civil servants who were seen as being redundant. The retrenchment option appeared to be the most difficult task to implement. The

Cameroon government used it as the last resort. According to Nunberg (1994) as cited by Kamanda (1999), the reluctance was attributed to the fact that many developing countries consider the public service as the central source of political patronage and social welfare, where the public service provides public positions to loyal followers and deserving citizens. It is strongly argued that the retrenchment policy did not do the country any good. Rather, it increased poverty, military spending, and public debts (Kamanda, 1999).

On Thursday June 24th, 2021, the Ministry of Finance – MINFI, unveiled a new guide meant to ease salaries and pensions procedures and payments in Cameroon. Payroll deductions are deductions made on behalf of certain public bodies by the Ministry of Finance through its various taxation establishments. The deductions are with respect to the audio visual loyalty, the Cameroon housing loan fund, Social contributions, and council special surtax. Theses bodies on whose behalf the deductions are made (e.g. the Cameroon radio television, Crédit Foncier du Cameroun, National employment fund, and Local and city councils) all have financial autonomy (Bragg, 2003).

In a foreword to a "Practical Guide for the Processing of Salaries and Pensions in Cameroon's Public Administration" the Government Minister of Finance, Louis Paul Motaze described the Guide as an educational document on salary processing procedures and practices. The document aimed at codifying procedures, unifying and standardising salary practices in all government departments in the country (Kingah, 2021). With this, it is hoped that there will be improvement in the quality of payroll accounting since payroll corruption or fraud will be curbed. It should be noted that payroll corruption prevails in many countries. For example, in the fight against payroll corruption since 2016, the Nigerian government has off rooted more than 20,000 ghost workers from its public service payroll. The Federal government's monthly payroll cost has dropped by 2.293bn naira (10.5 million euros). With the use of computer-assisted audit techniques the government is determined to avert further occurrences by making regular payroll audits (Rarieya, 2016).

Statement of the Problem

An official release by the Cameroon Minister of Finance, Louis Paul Motaze on January 8th 2020 disclosed that some 7,855 suspected ex-civil servants were duplicitously getting reversionary and invalidity pensions. He opined that more than 10,000 fictitious civil servants have been removed from the state payroll, making the government to secure since then, a yearly budgetary savings of 30 billion fcfa. In fact, the operation to get rid of ghost employees who had abandoned their posts or died from the public service payroll started in the second quarter of 2018 (Mbodiam, 2021).

In the same vein, the Cameroon's Minister of Public Service and Administrative Reform Joseph Lé announced the identification of 7,622 fictitious workers on the state payroll. For almost 4 years, the state of Cameroon has been unable to get clarification from all these personnel. According to the Minister 493 personnel have been sacked and the process was still ongoing. The ghost workers were described as state employees who abandoned their jobs to go and work for other organisations either at home or abroad. 315 dead civil servants were equally cited who were still on the state payroll with family members getting their salaries. Recovered ghost salaries were estimated 30 billion CFA francs (XINHUA, 2021).

Meanwhile, the Cameroon Prime Minister Joseph Dion Ngute in presenting the 2021 economic, financial, social, and cultural programs of the country to the members of parliament on November 25th 2020, disclosed that some 12 billion FCFA of salaries and pensions paid into the accounts of deceased servants have been recovered (Mbodiam, 2021). All these revelations triggered the minds of the authors to examine what determine an effective public sector payroll accounting system. A payroll accounting system no matter how well it may be designed to

meet the aspirations of the public sector may still end up being ineffective if the factors responsible for its success are not working effectively.

Consequently, this paper attempts identifying and assessing the determinants of an effective public sector payroll accounting system in Cameroon. The specific objectives were to examine the extent to which the following factors affect the effectiveness of the public sector payroll accounting system in Cameroon:

(a) Payroll audit practice;
(b) Payroll technology;
(c) Monitoring payroll controls;
(d) Payroll control environment.

The rest of the paper gives a review of current and related literature on determinants of an effective payroll accounting system, the methodology used, a discussion of the results, conclusion, and recommendations.

Literature Review

This segment of the study begins with the reviews of related concepts of payroll accounting system, payroll monitoring, and payroll audit practice. It proceeds with a review of the empirical literature in an effort to identify existing gaps in the domain.

Conceptual Literature

Payroll accounting system

Payroll accounting system is concerned with determining the total wages earned, the numerous deductions made, and the net pay of each employee. By and large, payroll accounting processes data such as labour hours, pay rates, and payroll deductions in order to provide accurate and timely payments to employees. It produces employer and employee records, and reports to government agencies, protects against payroll fraud, and controls salary and wage expenses (Hermanson, Edwards, & Salmonson, 1987). Payroll processing comprises calculations of workers' salaries, allowances, overtime, contributions, and deductions (Steven, 2004). The Cameroon public service payroll is governed by the Law No. 2017/010 of 12 July 2017 which lays down the general rules and regulations governing public establishments. On the other hand, the private sector is governed by the Cameroon Labour code Law No. 92/007 of 14 August 1992 which governs labour relations between wage-earners and employers as well as between employers and apprentices under their supervision.

The Cameroon payroll accounting system is computerised. A computerised accounting system (CAS) comprises a software designed to track all of accounting transactions of a company, in order to establish a financial output for monthly reports, yearly financial statements, tax return information, and other report configurations used in analysing the operations, efficiency, and profitability of an organisation (Gaffney 2018; Gilani 2017). A payroll computerised accounting system simplifies, integrates, and streamlines all business processes in a way that is cost effective (Tamplin, 2021).

On the other hand, the manual accounting system requires that employees perform the whole accounting cycle by manually doing the calculations, journalisation of transactions, preparation of ledgers and trial balances, and financial statement reports. Such manual systems could be very slow, time and effort consuming, and requires more personnel (Mahajan, Shukla, & Soni, 2015). However, in general it is cheaper to run. In the CAS, data is processed, organised, and structured by a computer in a given context to become information (Small, 2017).

The payroll computerised accounting system is therefore like any other computerised accounting system as it operates with the same components namely: procedure, data, people, hardware, and software (National Council of Educational Research and Training, 2021). This

implies that the payroll accounting system has a logical order of actions to produce salaries and wages in the public sector. Payroll data includes labour hours, rates, overtime premiums, bonuses, and allowances. The payroll personnel then use the computer and its associated peripherals and network to generate salaries and wages. A civil servant can generate his payslip anywhere he lays hands on a computer and internet. CAS has a higher accuracy and internal control system; easy backup and restoration of records. It however entails extremely high costs to develop, implement, and monitor the system. However, it requires specialised training for the payroll personnel with the associated increase in personnel costs. Unfortunately, it makes the organisation to depend on machines.

Risks that threaten the security of computer information systems as it concerns wrong entries made advertently, virus infections, disasters caused by employees have been largely attributed to the existence of staff void of business ethics and appropriate training to handle the existing technology (Hanini, 2012). Disadvantages and limitations attributed to CASs therefore include electricity failures, computer hacking and viruses. The inputted payroll data must be validated for accuracy and completeness.

Meanwhile, the concept of Garbage In [input], Garbage Out [output] will prevail to cause more harm than good if the system is not properly set up to meet public sector business requirements. This may occur due to errors in programming, unsuitable software, or hardware, and/or personnel related problems. All this can be overcome by putting in place a robust control and security measures, establish a UPS, and use trained payroll accounting personnel. Though computerised accounting is fairly costly, it is preferred to the manual system due to its speed, mobility, and accuracy (Small, 2017).

Payroll monitoring

Monitoring of payroll controls consists of reviewing activities such as record keeping, new worker reporting, processing of cheques, tax compilations, and advance salary and wage payments to ensure accuracy and prevent payroll errors and fraud (Soh & Bennie, 2011). Key activities on the payroll should be reviewed. There should be a review of appropriateness of payroll transactions and all inputs to be appropriate, complete, and accurate (Shattuck, 2016). All backdated payments should be properly verified before payroll runs. Through the monitoring of payroll controls any discrepancies can be quickly and easily corrected before it builds up to constitute irreparable payroll loss.

Payroll audit practices

Payroll audit practices to comprise system audit, performance audit and compliance audit (Nwaobia, Ogundajo, & Niyonzima, 2016). A system audit is an audit that independently and systematically verifies the internal controls within an information technology infrastructure. It allows the public sector to assess the performance of its operational systems **(**ISO 19011, 2018). On the other hand, performance audits are typically related to the public sector, and aims at examining the efficiency and effectiveness of the (payroll accounting) program, in order to carry out improvements.

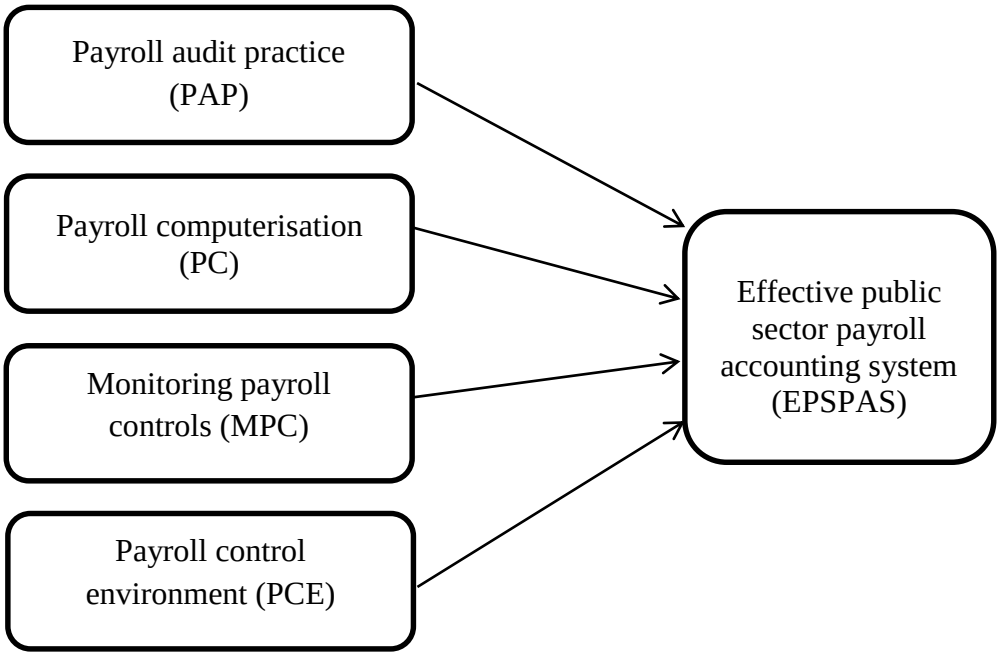
Payroll audit practices independently assess an entity's operations to determine if specific programs or functions are working as planned to accomplish identified goals. Compliance audit being that which assures the government of the concern abiding to the rules and regulations set out by the government. In general, the internal audit practice is crucial in verifying payroll transactions, monitoring and evaluating the effectiveness of a payroll accounting system (Kiabel, 2012; Van Gansberghe, 2005; Rameesh, 2003). Internal audit practices provide analysis, evaluation, and recommendations concerning the reviewed activity (Okezie, 2004).

Control environment

A Control Environment is the set of standards, processes, and structures (such as electricity and internet supply), that secure the foundation for effecting internal control in an

organisation. The senior management is expected to set the tone at the top vis-à-vis the level of significance of the internal control expected (Deloitte, 2021). It shows the level of support that management has for the (payroll) system of internal controls. A strong control environment lessens the frequency and severity of occurrence of (payroll) control failures (Accounting Tools, 2021). This suggests clearly that if top management believes that internal control is germane to the success of the payroll system, other staff will sense it and respond punctiliously in like manner as they follow the policies and procedures put in place.

Payroll Control Environment Framework



Where the hypotheses are stated as follows:

H_{01}: PAP does not significantly affect EPSPAS
H_{02}: PC does not significantly affect EPSPAS
H_{03}: MPC does not significantly affect EPSPAS
H_{04}: PCE does not significantly affect EPSPAS

Ghost employees

The Association of Certified Fraud Examiners (2008) described ghost workers as those listed on the payroll, recorded a payroll check, yet provide no services. Put in other words, Wells (2009) described a ghost employee as somebody who does not exist as a worker in an organization yet is listed on the payroll. A ghost worker exists merely as an identity in a payroll register, even though the ghost may be a physical being who does not truly work for the organisation (Lowers, 2014). From all these definitions of ghost employees, it can be asserted that ghost workers are the creation of existing employees. They are created advertently, or inadvertently.

Payroll fraud

Payroll fraud is also an important concept in this study. It is the theft of money from an organisation through the processing system of the payroll. It is perpetuated by individual employees or by an employer. It is carried out by the individual employee when he falsely increases the amount that he should be paid. It can be carried out by the employer where there is falsification of payroll information so as to avoid paying Pay as You Earn tax to the tax

authorities (Canon, 2021). Payroll fraud weighs significantly on the finances of the organisation unless detected and curbed early enough (Akeem, Momoh, & Danlami, 2016; Agboola, 2018).

Payroll fraud schemes include: Ghost employees, falsified salary hours, false workers compensation claims, and commission schemes. According to Gee et al. (2010), Ghost workers rob citizens of good quality public services even though the citizens have paid taxes in order to earn quality services. Thurston (2012) corroborates this by asserting salaries paid to ghost workers could have been useful in providing sound education, health care, and other social services.

Empirical Literature

In a study carried out by Kalufya and Nyello (2021) to investigate the internal audit practices and financial management of the payroll public sector accounting system in Tanzania, several findings were disclosed. The control environment significantly and positively influences payroll record processing. Also risk-based internal audit practices significantly and positively influences payroll reconciliation. Professional competence of the internal auditors had significantly positive effect on the effectiveness of the payroll accounting system. It was recommended that the internal audit function should serve as a strategic function rather than an operational function so as to strengthen the payroll accounting system.

Agboola (2015), Leyira (2018), Idris et al (2015), Enakireehi et al (2017) and others demonstrate that the installation of an electronic payroll and personnel management system could bring a lot of cost relief since it works effectively and efficiently. It may be expensive but internal control is an inevitable cost, if costs must be saved. The invention of laptops, and mini computers, electronic control could be now less expensive. Bothma (2019) argues that tools to overcome and avert fraud in payroll are available and should be acquired even though they have become quite sophisticated. However, he encourages payroll managers to urgently assess their current systems and ensure that remedial actions are taken by replacing or upgrading the existing payroll solution where weaknesses are detected.

Litdia (2019) carried out a study on the topic, Determinant of Internal Control of Payroll System Ethics: Evidence Base from PT. XYZ. This study examined how risk assessment, control activities, information and communication and monitoring influences the ethical behaviour of employees in the payroll system at PT. XYZ both partially and simultaneously. The result showed that monitoring significantly affects the ethical behaviour of employees in the payroll system of an organisation. In the same vein, Alawaqleh (2021) examined whether internal control would affect the performance of employees and whether the AIS would impact the performance of employees in small and medium-sized enterprises in Jordan. Analysing data using AMOS and SPSS, it was found out that internal control had a strong positive relationship with employee performance, and that accounting information system positively relates with the performance of the employee.

In Ghana, a study was conducted by Banyen and Nasamu (2015) to investigate the challenges faced by the government in applying the return mechanized voucher payroll management. The findings revealed that the return mechanized voucher system had main challenges including interruptions in the payment voucher preparation and distribution, weak and slow error detection and correction mechanisms, prevalence of ghost workers, and mass corruption. They then recommended that the electronic payment voucher system be adopted but not without exploiting other avenues and taking cognizance of the Ghanaian payroll peculiarities.

The same year, Nyaledzigbor (2015) also carried out a study in the Ghanaian public sector to discern the relationship between the size of the government agency, number of opportunities for ghost workers to thrive, and the occurrence of ghost public sector workers. It

was disclosed that a statistically significant and positive relationship exists amid the number of opportunities for ghost workers and the size of the government agency. He recommended the introduction of new controls in the administration of the Ghanaian payroll by making a revision of the Financial Administration Act of Ghana. Accordingly, payroll fraud would be curbed and public funds saved to permit the government provide more social amenities to its citizenry. The economic impact of fraud is always so significant. Private companies may lose their financial health and stability, the value of public services drops, disposable income of the population falls, and resources needed for charitable purposes are depleted. In a nut shell, fraud diminishes the quality of life (Gee, (2017).

Research Gap

Payroll accounting is an area in accounting with very few empirical studies. Most of the few studies focus on payroll accounting in private sectors of countries. It is based on this that this study got to investigate factors that determine an effective public sector payroll accounting system, since there has been a general cry of fraud schemes nurturing ghost civil servants.

Relevance of the Study

This research could be very useful to the Cameroon government to be more conscious of what determines an effective payroll system. The audit and investigation units of the public service can also through this become more conscientious of their role to detect and to prevent fraud. Researchers too may find the study useful in doing a critique of it.

Study Area and Methodology

This empirical study was conducted in the Ministry of Finance (MINFI) in Cameroon. Cameroon has 32 government ministries created following the presidential decree no. 2004/320 of December 8, 2004. MINFI directs the preparation of all government (ministerial) budgets. It is responsible for the tax and treasury management of the Cameroon government as organised by decree no. 2008/365 of November 2008. MINFI is the ministry in charge of the Cameroon public sector salaries and pensions for all the government ministries and regional and local councils. Consequently, MINFI is represented in all these government sectors.

An exploratory research design was used considering the inadequate availability of studies on this topic. 25 officials in the salaries and pensions department of MINFI Yaounde were identified as a purposive sample to respond to a questionnaire. The sample was considered endowed with characteristics that guaranteed the quality of the research (Patton, 1990). The questionnaire was designed to capture their perceptions about determinants of an effective public sector payroll accounting system (EPSPAS) namely: payroll audit practice (PAP), payroll computerisation (PC), monitoring payroll controlls (MPC), and payroll control environment (PCE). A Likert scale was used to enable the respondents to rate each parameter under examination from 1 to 5. With a regression analysis carried out, the output was used to determine the effect on the effectiveness of the public sector payroll accounting system.

$$EPSPAS = f\,(PAP, PC, MPC, PCE) \quad (1)$$

The econometrics equation for the model since the intersect coefficients together with the error term were to be estimated was stated as equation 2.

$$EPSPAS = \beta_0 + \beta_1 PAP + \beta_2 PC + \beta_3 MPC + \beta_4 PCE + \varepsilon i \quad (2)$$

Where:

EPSPAS = Effectiveness of the public sector payroll accounting system
PAP = Payroll audit practice
PC = Payroll computerisation
MPC = Monitoring payroll controls
PCE = Payroll control environment

β0 = Intersect,
β1, β2, β3, β4 = Coefficients to be estimated, and
Ɛi = Error term

Results

The analysis of respondents (Appendix 1) disclosed that 64% of the respondents were males and 36% were females. Concerning work experience in the Cameroon public sector payroll accounting, 24% were between 2 years and 5; 40% between 5 years and 10; and 36% were at least 10 years.

Table 1. Reliability of question items

Variable	Number of Items	Cronbach's alpha
EPSPAS	5	0.8408
PAP	5	0.8559
PC	5	0.8178
MPC	5	0.7803
PCE	5	0.7068

The Cronbach alpha coefficient of the variables measured the reliability of the items. As seen in table 1, the coefficients of all the items were above 0.70 which is the threshold. This indicates that all the items used where reliable, sharing more common variance with the construct than with the error variance (Carmines & Zeller, 1979).

Table 2. Summary of descriptive statistics

Variable	Observations	Mean	Standard deviation	Min	Max
EPSPAS	25	3.883095	0.88095	1.428571	5
PAP	25	4.071667	0.664244	2.333333	5
PC	25	3.930667	0.812165	1.5	5
MPC	25	3.882667	0.802178	1.5	5
PCE	25	3.93	0.890523	2	5

The summary of descriptive statistics in Table 2 shows that, all the variables had 25 observations each. The mean of EPSPAS is 3.883095 and the maximum and minimum values are 5 and 1.428571 respectively. Its standard deviation is 0.88095 indicating a small deviation from the mean. Table 2 was also used to test for normality. It therefore tested if the variables used in the model were normally distributed. Table 2 furthermore shows that the standard deviations of all the variables used are smaller than their mean values. This is a signal that all the variables used in the model were normally distributed, inferring that the variables were perfect variables to be used in the model.

Table 3. Pairwise correlation results

Variable	QPSPAS	SWNOS	APEEWG	ACPC	CRRGPM	Longevity
EPSPAS	1					
PAP	0.1584	1				
PC	0.0409	0.2056	1			
MPC	0.0761	0.0865	0.7024	1		
PCE	-0.0657	0.0683	0.7062	0.6450	1	
Longevity	-0.0713	-0.0175	0.0596	0.0976	0.0621	1

The correlation results presented in Table 3 reveal the existence of both positive and negative relationships between the variables involved in the model. These results also indicate that the correlation between one variable and itself is 1 (i.e. perfectly collinear). These correlation results could also be used as a prologue to investigate the existence of multicollinearity. There exist weak and average correlations between the variables indicated by their values which are less than 0.70 in all cases. A weak and average correlation discloses the absence of multicollinearity as observed above. Nevertheless, to carry out additional verification to support the results of the Pairwise correlation, the Variance Inflation Factor (VIF) test for multicollinearity was done and presented in Table 4.

Table 4. Variance Inflation Factor (VIF)

Variable	VIF	1/VIF
EPSPAS	2.65	0.377254
PAP	2.2	0.453697
PC	2.18	0.458707
MPC	1.06	0.942737
PCE	1.01	0.989736
Mean VIF	**1.82**	

To test for multicollinearity, the Variance Inflating Factor (VIF) and its inverse, the tolerance level was used. The results from Table 4 show that the values of VIF are decreasing and approaching 1 as we go down the table. The highest value is 2.65, while the average is 1.82. This was an indication that there was no multicollinearity among the independent variables being used in the analysis. Consequently, the proposed model was estimated.

Table 5. ANOVA results

Source	SS	Df	MS	Number of observations = 25
				F(5, 94) = 3.28
Model	6.876572	5	1.375314	Prob > F = 0.0089
Residual	69.9546	94	0.744198	R-squared = 0.0895
				Adj R-squared = 0.0411
Total	76.83118	99	0.776072	Root MSE = 0.86267

For the test of hypothesis, since the value for Fcal (3.28) > P (0.0089), we reject H_0, and conclude that the independent variables have significant effects on the dependent variable (an effective public sector payroll accounting system). This is statistically significantly at 1% level of significance. Thus, the overall model is well fitted.

The value for Adjusted R Square indicates the degree of variations in an effective public sector payroll accounting system captured by variations in the variables used in the model. From the results in Table 5, the value of Adjusted R Square, 0.0411 indicates that 4.11% variation in an effective public sector payroll accounting system is attributed to changes (variations) in the variables included in the model.

Discussion of Results

The regression results in Table 6 give the linearized result of the OLS. It is linearized because of the presence of heteroscedasticity with the normal OLS results. The result shows that payroll audit practice (PAP) has a positive relationship with an effective public sector payroll accounting system (EPSPAS).

Table 6. Regression results

Variable	Coefficient	Linearised Standard Error	T-statistics	P>t
PAP	0.15148**	0.058556	2.59	0.011
PC	0.26846*	0.159877	1.68	0.096
MPC	0.16257**	0.073547	2.21	0.03
PCE	0.22049	0.148980	1.48	0.127
Longevity	-0.0879	0.091458	-0.96	0.339
Constant	5.61891***	0.881494	6.37	0.00

Note: Level of significance: *** = 1%; ** = 5%; * = 10%

PAP has a coefficient of 0.15148 implying that when there is an increase in PAP by a unit, EPSPAS will increase by 0.15148. This result is statistically significant at 5% level of significance, thus rejecting the first null hypothesis. This result is supported by that of Kalufya and Nyello (2021) which investigated the internal audit practices and financial management of the payroll public sector accounting system in Tanzania and found out that internal audit practices significantly and positively influence payroll reconciliation.

Also, the variable payroll computerisation (PC) has a positive relationship with the effectiveness of public sector payroll accounting system (EPSPAS). PT has a coefficient of 0.26846. This implies that when there is an increase in the quality of PC by a unit, the EPSPAS will increase by 0.26846. This result is statistically significant at 10% level, also indicating that the variable PC is important determinant of the effectiveness of the public sector payroll accounting in Cameroon. It therefore rejects the second null hypothesis. This is in line with Tamplin, 2021 who asserts that a computerised payroll accounting system simplifies, integrates, and streamlines all business processes in a way that is cost effective.

The finding is further supported by Mahajan, Shukla, and Soni, (2015), Banyen and Nasamu (2015), and Leyira (2018) who showed that the computerised payroll systems substantially reduce delays and errors in salary preparations. The result also agrees with Agboola (2015), Leyira (2018), Idris et al (2015), Enakireehi et al (2017) who avert that the installation of a computerised payroll and personnel management system could bring a lot of cost relief since the effectiveness and efficiency of the payroll system is boosted.

Monitoring payroll controls (MPC) on the other hand has a significant positive relationship with EPSPAS. MPC has a coefficient of 0.16257. This infers that when there is an improvement in MPC by one unit, there will be an increase EPSPAS by 0.16257. This result is statistically significant at 5% level of significance, making the variable MPC an important determinant of EPSPAS. Consequently, the third null hypothesis is rejected. This result agrees with that of Litdia (2019) that monitoring significantly affects the ethical behaviour of employees in the payroll system of an organisation. The result is further supported by Alawaqleh (2021) that monitoring of internal controls has a strong positive relationship with employee performance.

The variable payroll control environment (PCE) is seen to have an insignificant influence on the EPSPAS. This result corroborates that of Litdia (2019) that the control environment only moderately influences the ethical behaviour of personnel in a payroll system. It confirms the fourth null hypothesis.

The coefficient of the constant 5.61891 indicates the intersect which implies that if all the independent variables under study were considered to be zero or not to have any effect on the dependent variable EPSPAS, the effectiveness of public sector payroll accounting system will be 5.61891 in the model. This is statistically significant at 1% level of significance.

Policy Implications and Conclusion

The paper studied the determinants of an effective payroll accounting system in the Cameroon public sector. The major findings reveal that payroll computerisation, payroll audit practices, and monitoring payroll controls, significantly determine the effectiveness of the public sector payroll accounting system in Cameroon.

Recommendations

a) A regular assessment of the payroll computerisation system should be made to keep both the payroll software and hardware in check so as to guarantee an effective payroll accounting system for the public sector. Where the need arises the government should immediately consider replacing or upgrading the existing system. For the payroll computerisation system to be effective on a regular basis, control environmental structures such as regular power and internet supplies should be ensured.
b) Furthermore, the payroll audit practices should be reactivated so as to bring payroll errors and fraud to an inconsequential level. The auditors should always verify that character checks were made on potential employees before they were assigned to work in the Salaries and Pensions Department of MINFI.
c) Lastly, monitoring of payroll internal controls should be an operational activity by top level payroll personnel who should themselves demonstrate a professional and exemplary character and attitude for subordinates to emulate and make the payroll internal controls work as planned.

The implementation of the above recommendations should significantly eliminate payroll errors and fraud and of course, improve the effectiveness of the public sector payroll system. In this way, the government would be able to save much money to improve on the quality and magnitude of the public services offered to its citizenry.

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Appendix: Analysis of Respondents

Variable	Categories	Frequency	Percentage
Sex	Male	16	64
	Female	9	36
Longevity	2 ≥ 5	6	24
	5 ≥ 10	10	40
	10 ≤	9	36