

Ghana's Single Spine Pay Policy on Youth Unemployment: Application of the Partial Least Square Modelling Approach

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Abstract

This paper examined the effect of Ghana's single spine pay policy on unemployment. An exploratory sequential mixed design method was used in collecting data from 413 business owners and managers – which comprised: manufacturing companies, service industries, wholesalers as well as small and medium sized enterprises. Structural Equation Model (SEM) statistical technique with Partial Least Square 3.0 as well as Statistical Package for Social Sciences 24.0 were used to analyze the hypothesized relationships. It was observed that, single spine pay policy had a significant positive effect on unemployment. It was evident that, the policy has a very high significant influence on cyclical unemployment followed by frictional unemployment as well as the structural unemployment in that order. The study contributed to the ongoing research in examining the linkage between single spine pay policy and unemployment; it also added to the extant literature in measuring unemployment as a concept in collections rather than a single conception. The strategic implication of the results are discussed in the paper.

Introduction

Pay reform has become an essential activity in public service administration throughout the world over the past two decades. They are mostly undertaken by governments with the objective of refining public service salaries in rectifying disparities and inequities in Pay System (Aliu and Fuseini, 2014). The Government of Ghana in 2009 put forward the Single Spine Pay Policy (SSPP) as a proposal to reinstate equity and transparency in public service pay administration, which was implemented in 2010 to regulate the payment of public service workers especially those under article 190 of the 1992 Constitution of Ghana for over a five year period with public sector workers.

As part of the measures in righting those disparities and inequalities, commissions and committees have been formed from the days of the colonial era such as the Guggisberg Appointed Committee (1927), Harragin Commission (1945-1946), Mills-Odoi (1967); Issifu Ali (1973); Justice Azu-Crabbe (1979-1983) and Gyampoh (1992 - 1993) as well as the Ghana Universal Salary Structure (GUSS) in 1999. It was in 2009 that the Government admitted that the SSPP was going to be pertinent to the Public Service institutions as specified in Article 190 of the 1992 Constitution. It then placed workers in public corporations apart from those set up as commercial ventures, public services established by the constitution and all other public services as Parliament by law prescribed also included in the SSSS (GOG White Paper, 2009). It included public sector employees such as Civil Service, the Judicial Service, the Audit Service, the Ghana Education Service, the Ghana Health Service, the Parliamentary Service, the National Fire Service, the Customs, Exercise and Preventive Service, the Internal Revenue Service, Local Government Service, the Police Service, and the Prisons Service except employees under Article 71 of the 1992 Constitution, and the Ghana Armed Forces.

Notwithstanding the impressive attempts in correcting the distortions in the pay structure by the various governments; income inequality, frequent demonstrations, unions' strikes and unemployment have all characterized the policy after its introduction in 2009 and implementation in 2010. Ghana like many other African countries has a high unemployment/underemployment rate (Oppenheimer & Spicer, 2011). According to ILO (2014:10) the number of unemployed

persons had increased more than 215 million in 2018, an indication that the global economy is not creating adequate jobs to cater for the increasing labour force. Creating employment opportunities remains one of the challenges of many Africa's policy-makers (ILO, 2014a:70; Garg, 2014). Employment heights and worker efficiency are normally low, replicating a trend, which is interrelated to the sub - regions social and human development challenges (Garg, 2014:3).

According to Nkrumah (1980:5), many government policy implementations in Ghana tend to fail due to pauses in direction and problems in the plan documentation. Sakyi (2008a) also traced some of the challenges that affect implementation of civil service reform in Ghana to lack of political will, institutional resource incapacity coupled with the conflicts between various agencies in the process of implementation. Kiragu and Mukandala (2003) observed that, many of the public service reform failures mostly emanate from fiscal deficits towards their implementation. Mperere (2015) posited that, the implementation of the pay structure had suffered several tryouts though it was a well-crafted policy. According to the World Bank report in 2012 titled "The Republic of Ghana Selected Policy Issues", showed that, Ghana had no fundamental guidelines for the execution of projects in general as well as in the area of controlling cost. Schiavo-Campo observed in their study as revealed by Kiragu & Mukandala (2003) that realizations in pay reform based on the common pay and employment have been limited, unassuming and transitory. The policy in Single Spine Pay structure in Ghana was drafted and implemented purposely to correct the anomalies in the public sector pay reforms at the expense of the private sectors – that contributes to the greater percent of the general workforce, unlike in Singapore where the public sector pay levels are generally higher than that of the private sector (Kiragu & Mukandala, 2003).

There are limited studies on Single Spine Pay Policy in Ghana – especially its effects on unemployment; the measurement of unemployment as a unidimensional construct instead of a multidimensional construct; limited studies on exploratory sequential mixed method as well as the use of secondary data for predictions mostly in policy research has necessitated this study.

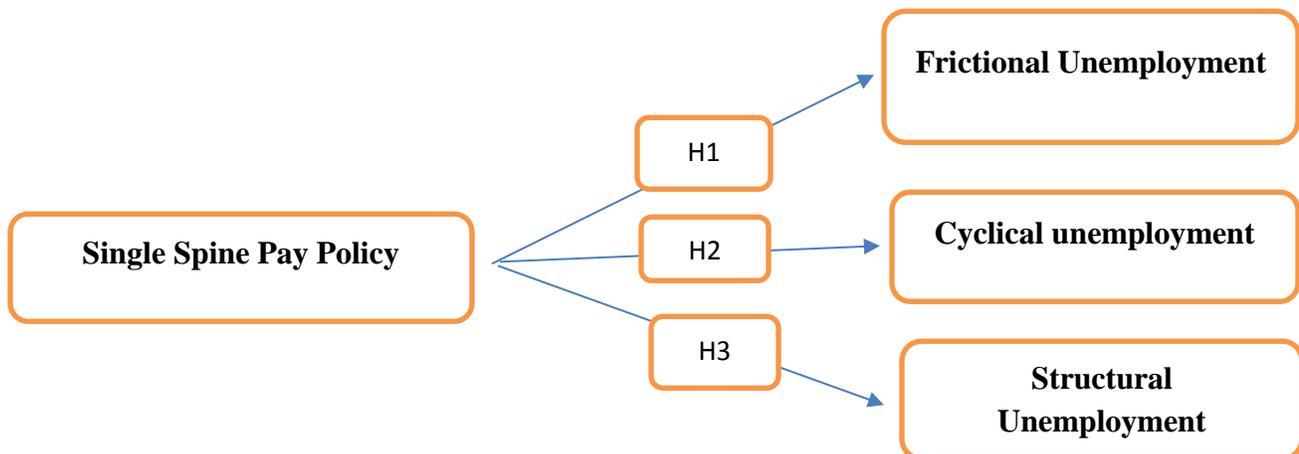
Research Objectives

The objectives of the study were to:

1. examine the relationship between Ghana's Single Spine Salary pay policy on frictional unemployment.
2. determine the relationship between Ghana's Single Spine Salary pay policy on structural unemployment.
3. analyse the relationship between Ghana's Single Spine Salary pay policy on cyclical unemployment.
4. examine the relationship between the demographic variables on the component of the unemployment types.

Conceptual Model of the study

Figure 1: Conceptual model of the study



Source: Author's own construction (2018)

Literature review

Single Spine Salary structure

The policy encompasses the placement of all public sector employees listed in Article 190 of the 1992 Constitution on one unified salary structure known as Single Spine Salary Structure (SSSS). The public sector employees included in the SSSS are those in the Civil Service, the Judicial Service, the Audit Service, the Ghana Education Service, the Ghana Health Service, the Parliamentary Service, the National Fire Service, the Customs, Exercise and Preventive Service, the Internal Revenue Service, the Local Government Service, the Police Service, and the Prisons Service. Workers in public corporations other than those set up as commercial ventures, public services established by the constitution and all other public services as Parliament may by law prescribed also included in the SSSS (GWP, 2009).

Those excluded from the structure were the military and public officials covered by Article 71 of the 1992 Constitution of Ghana. Those public office holders include the President, the Vice President, the Chairman and Members of Council of State, Ministers of State and their Deputies, the Speaker and Deputy Speakers and Members of Parliament, the Chief Justice and other justices of the Superior Court of Judicature, the Chairman and Deputy Chairman of the Electoral Commission and others (GWP, 2009).

Frictional unemployment

Frictional unemployment was defined by Swanepoel and Van Zyl (1999:263) as a situation where people move between jobs after leaving their job, which according to Janoski et al. (2014:7), the employers and the employees are more or less struggle to find each other in weeks or months. The issue of employees leaving their jobs and moving between jobs, frictional unemployment will always be there, irrespective of how the economy is performing (McConnell et al., 2009; AEO, 2012; Lindbeck, 2015:738).

In the this study, the frictional unemployment was defined using Swanepoel and Van Zyl (1999:263) definition in a situation where people become unemployed while looking for a new job after leaving their previous one.

Cyclical unemployment

Cyclical unemployment is a situation where there is an imbalance in the labour market where labour supply is said to be in excess at dominant wage rates (Lindbeck, 2015:738; Longhi & Taylor, 2013:1). That the imbalance is between the number of jobs accessible in the market and number of people considering for jobs at a given period of time. Mohr et al. (2009:500) observed that cyclical unemployment comes from the demand side of the economy.

The study defined employment as the situation where the overall demand for goods and services in an economy cannot support the full employment thereby leaving many people unemployed.

Structural unemployment

Structural unemployment was defined by Swanepoel and Van Zyl (1999:264) as the unemployment type that is associated with the changes in the economy due to modern technological advancement, variations in consumer choices, competition etc. According to Mirko (2005:52), structural unemployment could either stem from the frictions in the labour market. According to Freeman (1979:118) structural unemployment occurs due to the rooted structural trials in the labour market that frequently decrease employment prospects.

The study's definition for structural unemployment is where there is a mismatch between what people in an economy have and the skills demanded by employers.

Methodology

Sample and data collection

The study's sample was drawn from managers or business owners of companies in Accra, Tema, Takoradi and Kumasi in Ghana—through purposive sampling and snowballing sampling techniques. The survey was conducted from January 2019 to June 2019. The total number of returned questionnaires was 413. Letters were sent to the companies situated in the named business cities clarifying the basis of the study while a request was made for their involvement in providing

information for the study. At the end of the five month period, 413 of the managers had responded to the questionnaires. Five research assistants were trained to be part of the collection after the initial contacts had been made by the author.

Measurement and questionnaire design

Research scales were solely designed by the author with the help of four labour experts from both the Kwame Nkrumah University of Science and Technology, Kumasi – Ghana as well as the University of Witwatersrand in South Africa. They were then subjected to exploratory factor analysis to assess the study's sampling appropriateness. Measurement items on single spine pay policy; frictional unemployment; structural unemployment as well as cyclical unemployment were all subjected to rigorous validation process before they were finally used for the actual analysis. The measurement items were measured on a 5-point Likert scale that was anchored by 1 = strongly disagree to 5 = strongly agree.

Unidimensionality test

A dimensionality valuation was carried out to test the study's sampling adequacy along with Exploratory Factor Analysis (EFA) and they were in a form of steps: First, Kaiser-Meyer-Olkin (KMO) of sampling adequacy was higher than .8 for each of the study's variable to substantiate the appropriateness of the data for factor analysis while that of the Bartlett's test of sphericity was also less than 0.05 ($p < 0.05$) for all the constructs used in the study (Meyer & Collier, 2001; Pallant, 2010, p. 187). Moreover, a principle components analysis and varimax rotation were also considered to extract appropriate factors for the study's analysis. Third, as part of the selection criterion for significant factors and questions, the criteria were set to be significant at above 1.0 for Eigenvalue, greater than .1 for Factor loadings, and at $p < 0.05$ for significance probability (Pallant, 2010, p. 192). The exploratory factor analysis was to obtain hypothetically significant factors because it was part of the pioneering process in getting items or questions for the study. The findings of the analysis showed that KMO, Bartlett's sphericity test and significance probability levels all exceeding the recommended thresholds for each of the construct. Eigenvalues

for the study's constructs were as follows: Single spine pay Policy (2.834), Frictional unemployment (2.543), cyclical unemployment (2.902) and structural unemployment (2.202). Factor loadings showed aptness—all surpassing .1. Cumulative variances within the four factors produced high explanatory power of 71.90 %. The results proved that, unidimensionality was acceptable for the measured items because each item showed high loadings in the factors making it passable for structural analysis.

Table 1 : Dimensionality statistics of the Exploratory Factor Analysis (EFA)

Constructs (Number of items retained)	Factor Loadings Dimensionality Model (EFA)
Single Spine Pay Policy (5) out of (7)	0.629; 0.640; 0.743; 0.701; 0.758
Frictional unemployment (3) out of (7)	0.719; 0.819; 0.697
Cyclical unemployment (4) out of (7)	0.866; 0.894 ; 0.728; 0.846
Structural unemployment (6) out of (7)	0.565; 0.561; 0.653; 0.755; 0.810; 0.803

Source: Author's own compilation (2019).

The above table explains the dimensionality statistics between the actual items or questions that were retained before the study's structural analysis was carried out.

Table 2 : Reliability and validity

	Cronbach alpha	Rho_A	Composite reliability	Average variance extracted
Cyclical unemployment	0.859	0.899	0.902	0.698
Frictional unemployment	0.701	0.702	0.790	0.558
Single Spine Pay Policy	0.740	0.751	0.824	0.523
Structural unemployment	0.787	0.818	0.849	0.512

Source: Author's own compilation (2019).

Reliability is the extent at which research is consistent with what it measures (White and Denholm, 2011: 235). The reliability of the study's instrument was assessed using Cronbach alpha and composite reliability which were all greater than 0.7 as seen from Table 4.6.

Validity measures what is supposed to be measured. According to Hair et al. (2006: 771) convergent validity is “the extent at which indicators of a specific variable converge or share a high proportion of variance in common.” It simply explains the extent at which a scale correlates

with other measures of the same construct to the same direction. According to Carlsman and Herdman (2012) weaker convergent validity is evident using values deviating from one while values closer to one are normally accepted. Table 4.6 presents the estimates of loadings that were all greater than 0.5, showing a greater convergent validity.

The average variance extracted approximate reflects the total elements of variance in the indicators which are accounted for by a latent construct. Dillon and Goldstein (1984) suggested that an AVE value greater than 0.50 demonstrates that the convergent validity of the variable is good.

Table 3 : Discriminant validity

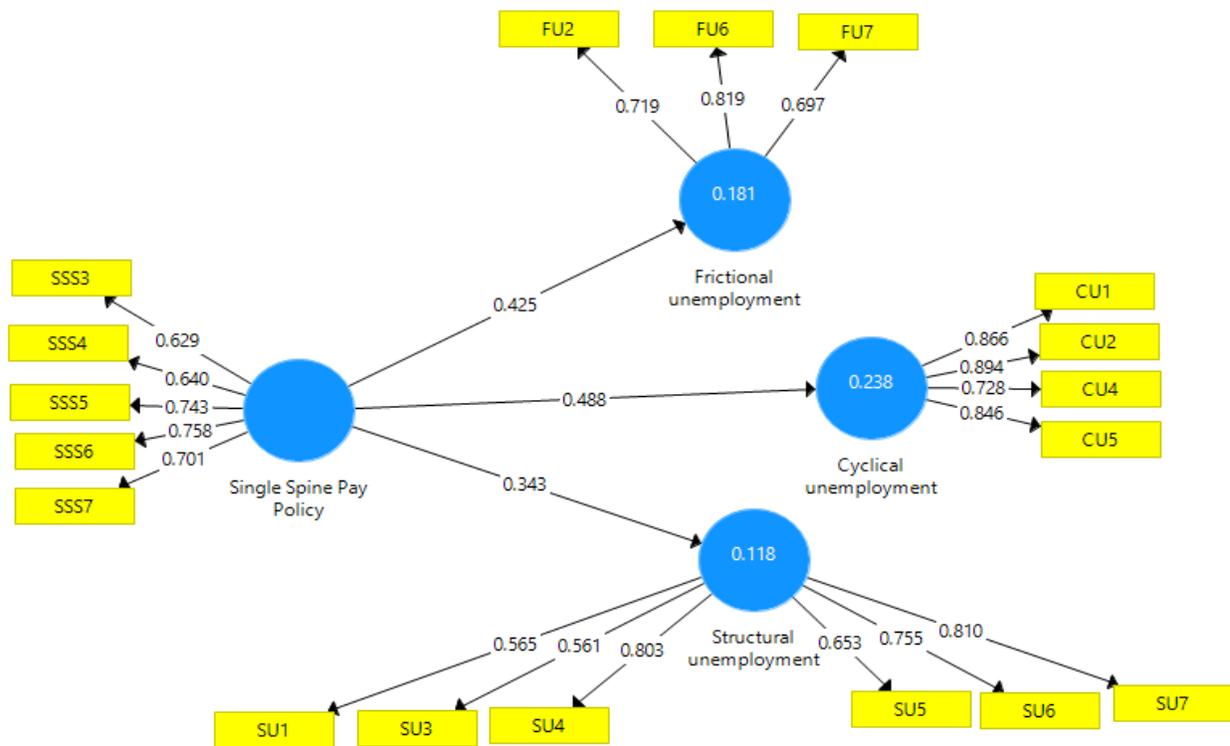
	CU	FU	SSPP	SU
Cyclical unemployment (CU)	0.836			
Frictional unemployment (FU)	0.701	0.747		
Single Spine Pay Policy (SSPP)	0.588	0.525	0.696	
Structural unemployment (SU)	0.597	0.541	0.343	0.699

Source: Author's own compilation (2019).

SSPP = Single Spine Pay Policy; FU = Frictional unemployment; Cyclical unemployment; Structural unemployment; T – statistics = 1.65; P < 0.05 and P < 0.01

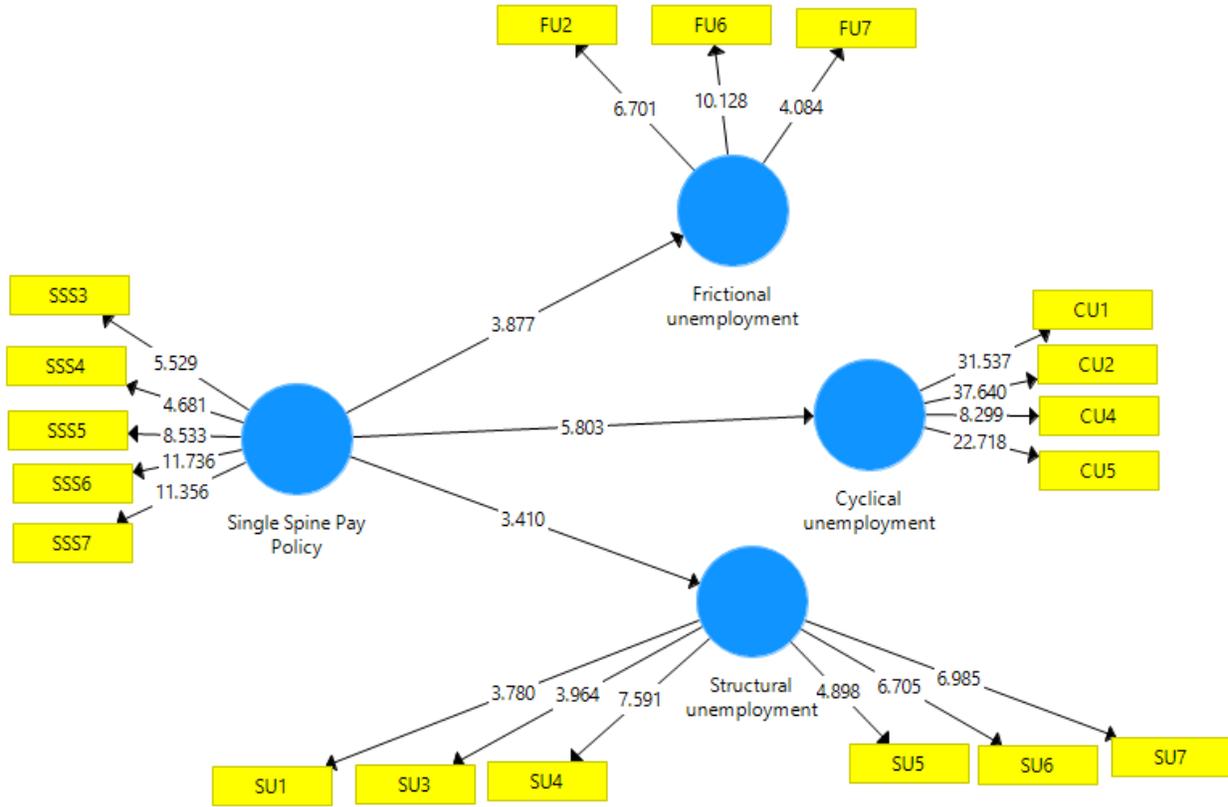
According to Fornell and Larcker (1981:337), discriminant validity is achieved if the square root of its AVE is greater than each correlation coefficient with other constructs. The results presented in Tables 2 and 3 satisfy that requirement, and thus demonstrate that adequate discriminant validity has been achieved.

Figure 2: Structural model of the study



SSPP = Single Spine Pay Policy; FU = Frictional unemployment; Cyclical unemployment; Structural unemployment.

Figure 3: Structural model of the study with T - statistics



SSPP = Single Spine Pay Policy; FU = Frictional unemployment; Cyclical unemployment; Structural unemployment.

Table 4 : Structural analysis

Study's hypothesis	Hypothesis	Path coefficients	T - Statistics	P -Values	Supported / Rejected
SSPP → FU	H1	0.425	3.877	0.000***	Supported
SSPP → CU	H2	0.488	5.803	0.000***	Supported
SSPP → SU	H3	0.343	3.410	0.000 ***	Supported

SSPP = Single Spine Pay Policy; FU = Frictional unemployment; Cyclical unemployment; Structural unemployment; T – statistics = 1.65; P < 0.05 and P < 0.01

Findings and discussions

It was revealed from the interview that the introduction of the single spine pay policy led to business owners not employing people and below were some of the quotes from the interview:

“My workers were comparing themselves to those in the public sector in terms of salaries and that was worrying”. My brother, the behavior of my employees changed, few days after the first pay of the single spine salary among public sector workers came out 'It then forced me to limit the numbers”

“I stopped employing more after 2010 when the single spine was introduced”

“After the introduction of the single spine pay policy, I saw a change in attitude of my workers and that compelled me to limit or to reduce the numbers that I can employ”

“I cannot match up with what the government is offering to my employees, so I do not employ many people now”

The quantitative analysing of the study was given as follows: the study sought to examine the influence of single spine pay policy on Ghana’s unemployment. Three hypotheses were outlined as the hypothesised relationships of the study. Hypothesis (H1) posited a significant positive relationship between “single spine pay policy” and “Frictional unemployment”. Hypothesis (H2) posited a significant positive relationship between “Single spine Pay policy” and “cyclical unemployment” while Hypothesis (H3) postulated a significant positive relationship between “single spine pay policy” and “structural unemployment”. The findings demonstrated in general that single spine pay policy had led to an increased in the number of the unemployment rate in Ghana. The findings further revealed that, the effect was stronger on cyclical unemployment, followed by the frictional unemployment as well as the structural unemployment.

Contribution of the study

The study's contribution is in three phases: In the first place, the findings from the study contribute to the scant literature on single spine pay policy and unemployment – especially from the perspective of measuring unemployment as a multi – dimensional construct. In addition, it also fills the void in the empirical literature on the limited application of sequential mixed design method in assessing single spine pay policy – unemployment relationship. Moreover, the study also contributes to the activities of policy makers in the area of outlining policies by critically assessing their outcome.

Conclusions

The main aim of the study was to investigate the effects of single spine pay policy on unemployment in Ghana. The study revealed that single spine pay policy had a greater effect on all the three dimensions of the unemployment. In particular, the effects on the cyclical unemployment was high; followed by the frictional unemployment as well as the structural unemployment which recorded the least effect but they were all positive in terms of the relationships. It can therefore be concluded that cyclical single spine pay policy has led to a holistic effects on Ghana's unemployment rate.

Limitations of the study and avenue for future research

This study was limited to only four business cities in Ghana – namely: Accra, Tema, Takoradi and Kumasi. This evidently affected the sample size used and therefore future researchers ought to add all the other business cities in the various regions, so as to increase the sample size.

The use of the non – probability sampling technique instead of the probability sampling is expected to limit the study in terms of generalisation. Future studies ought to apply a probability sampling technique so as to make it easier for a generalisation to be made.

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