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THE EFFECT OF NHIA DEBT ON ACCOUNTS PAYABLES MANAGEMENT IN PUBLIC HOSPITALS

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ABSTRACT

NHIS has become a key means of ensuring accessibility to improved health care delivery in many countries. Indebtedness on the scheme to the public hospitals are high on the accounts receivable structure and its payments are delayed sometimes over six months. Accounts payables of same hospitals continue to increase to points of threatening service delivery from such facilities. The study analysis the relationship between debts of NHIS to hospitals by way of proportion of the debt, accounts receivable balances and accounts receivable periods of NHIS debts; on the accounts payable balances and accounts payable periods and realises that, the NHIS debt settlements by way of amounts, its period of days of payment and its structure affects hospitals ability settling its payables in amounts and on time, thus affecting the delivery of quality health service.

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Keywords: Accounts receivable, Accounts receivable period, Public financial management system, Accounts payable, Accounts payable period, Accounts payable balance, NHIS, Public hospitals.

1. INTRODUCTION

Ghana's National Health Insurance Scheme was introduced in 2004 following the passage of the Act of Parliament, Act 650 of 2003 and Legislative Instrument 1809, 2004 (Seddor et al., 2011). The National Health Insurance Council was established to manage the National Health Insurance Fund and to provide subsidies to District wide Mutual Health Insurance Schemes (DMHIS), regulate the insurance market and licence and monitor service providers under the scheme. The schemes inception was driven by challenges that confronted health development including failure of the out-of-pocket fee for service system to promote quality and access healthcare. The scheme, financed from five main sources namely: appropriation of 2.5% of all funds of funds mobilized from workers' pension contribution to SSNIT; 2.5% ad valorem tax

levied on Value Added Tax (VAT) purchased goods or services; Parliament approved Government annual budgetary allocation to NHIF; accruals from investment of surplus funds held in NHIF by the NHIC; and, benefactors' gifts and donations made to the NHIF (Seddor et al., 2011) in 2008, the CEO of National Health Insurance Authority (NHIA) indicated that, the bulk of the scheme's income will grow with national income rather than membership numbers. In contrast to the CEO's optimism, following the GDP growth of 6.2% in 2008 as against membership growth from 36% in 2007 to 45% in 2008, it was feared that, the more successful the National Health Insurance Scheme (NHIS) becomes, the greater the risk of financial difficulties it may run into (Annang, 2011)

Commonwealth on Health Care Systems Financing & Coverage, in an analysis of data from 15 advanced countries indicated that, regardless of public/ private role in health systems, public system financing are mainly from assortment of taxes, and had percentage of healthcare spending on GDP averaging 10%, with the exception of US that had 17% (The Common Wealth Fund, 2012) Also, Health Care spending per capita, and Hospital spending per capita in those countries averaged US$ 4,000 and US$1,300, respectively. The document indicated that in 11 of the countries, as a way of containing costs and yet, to achieve quality and efficiency at the same time, reliance on overall budgets for ambulatory physicians and hospitals and collective regional prescription caps for physicians has been stopped. Physicians are however liable if they exceed regular volumes for their patient mix above the prescription cap. Unlike neighbouring practicing nations in the sub-region, no mention was made of bills settlement being an issue in any of those 15 countries.

Theoretical and empirical evidence show positive correlation between good health and economic development (Acharya and Ranson, 2005) Evident as it may be, that, healthcare expenditure impacts poor household's budget as they are unable to earn during illness and are also unable to bear large amounts on medical care, most sub-regional healthcare interventions are shrouded in lapses.

A World Health Organisation studies cited by Pharmaceutical Society of Nigeria (PSN) revealed that, one of the reasons why the NHIS in Nigeria was not effective and rather expensive was that, private health clinics charge up to 184% and 193% more than the public health facilities and the private retail pharmacies in Nigeria respectively (Muanya, 2010) Yet, government continued to overtly and covertly support these private facilities to dispense drugs, thereby increasing overall cost of healthcare (Muanya, 2010) Challenges associated with the system short-changed enrolees as they are not guaranteed the best drugs or diagnostic services as profit maximisation had taken the centre of the equation. Despite these misgivings arising from poor implementation of the scheme, PSN however believed that NHIS is one of the most credible alternatives for funding healthcare.

In Ghana, the National Health Insurance Scheme (NHIS) has been described as an important cornerstone to quality health care delivery (Kumbuor, 2009) Despite attempt by government to strengthen Ghana's health system, the health of the rural communities is far from satisfactory

(Peacefmonline, 2009) Government Hospitals are touted to be in shambolic mess, to the extent that, authorities at the Public Hospitals (PHs) have had to suspend some medical operations because of lack of facilities, high breakdown rates, with the conditions of their facilities increasingly dilapidating with time as there is insufficient maintenance of equipment (Auditor, 2008; Tagoe, 2011) The absence of basic facilities such as wheelchairs has caused awful scenes of manhandling of patients which has led to the unfortunate death of friends and relations in clearly avoidable circumstances, causing worry. Further, patients on admission at major government hospitals cannot access drugs on NHIS list from pharmacies within the hospital for various reasons, including difficulty of tracking drug usage for proper accountability due to unavailability of softwar (The Finder, 2012) Adding salt to injuries, Tagoe indicates that, Government officials demonstrate lack of confidence in the government health facilities as they fly out to countries such as England, US, South Africa and other such places for medical attention.

Health care delivery systems at Health facilities have faced imminent danger of collapse as a result of depleting stocks of medical supplies at Medical Stores, including essential drugs such as anti-malaria medicines due to the facilities indebtedness to suppliers, running into millions of cedis (Public Agenda, 2011) The debt has been attributable to delays by the NHIA in paying claims submitted by health facilities.

The Auditor General's 2012 Performance Audit Report implicated the Management of Claims of the NHIA and DMHIS as delaying payment of claims to health service providers, in some cases exceeding the stipulated 40 days, with payment delays usually lasting 3 to 6 months, though an improvement of the over 1 year payment lag as per 2005-8 audit report (Auditor, 2008; The Auditor General, 2012) The situation has consistently been attributed to claim managers' inability to finish vetting claims, and NHIA also not releasing funds for the payment of claims on time. As a way forward, timely release of funds for claims payments by Ministry of Finance & Economic Planning (MoFEP) in addition to online mechanisms of submitting and vetting claims have been suggested to reduce pressure on claim managers.

In a presentation at a health summit held at Ghana Institute of Management and Public Administration (GIMPA), the Chief Director of NHIA in 2009, acknowledged that, as much as 15% of claim payments to HDPs in 2009 were overpayments. Again, an audit conducted on NHIA in February 2010 by Clinical Audit Unit indicated that, 164 HSP operating under NHIA misappropriated a total of GHC 6.4billio (The Auditor General, 2012) Also, claims that did not qualify for payment were sometimes passed for payment. While the phenomenon was partly attributed to weak internal controls in the vetting and payment processes, with some vetting officers lacking the requisite training and skills, speeding claims payment processes as earlier suggested without ensuring due care could be disastrous.

Way back into time, Public Hospitals (PHs) have had severe economic strains that have hampered their operations. In 1985, as a way of alleviating the financial difficulties confronting the health sectors' ability to delivering quality healthcare, the Internally Generated Fund (IGF) was

introduced (Auditor, 2008) Since then, the IGF has become the major source of finance to public hospitals, constituting about 77% of total receipts. With the advent of NHIS, the scheme has become the major funding component in the IGF, to the extent that, NHIA happens to be the main debtor to public hospitals. Following the 2005-2008 Auditor General's observation that, it takes a year or more for fund managers to fulfil their obligations to the hospitals, causing the hospitals to be indebted to their creditors, the study takes particular interest in the NHIA's indebtedness to public hospitals and their credit capacity to pay creditors.

The study proceeds on the following null hypotheses:

A1: NHIS's share of credit revenue to public hospitals has no effect on Total accounts payable balances of public hospitals

B1: NHIS's Accounts receivable period have no effect on Total Accounts Payable Balances of Public Hospitals

C1: Accounts receivable balances of NHIS debts have no effect on Total Accounts Payable Balances of Public Hospitals

A2: NHIS's share of credit revenue to public hospitals has no effect on Total Accounts Payable Periods of Public Hospitals

B2: NHIS's Accounts receivable balances have no effect on Total Accounts Payable Periods of Public Hospitals

C2: Accounts receivable period of NHIS debts have no effect on Total Accounts Payable Periods of Public Hospitals

While the hospitals are faced with infrastructural problems, other problems are compounded by under capacity operation and, insufficient maintenance of equipment with frequent breakdown (Auditor, 2008) According to the Director General of Ghana Health Service the scheme owed public hospitals to the tune of GHC 36 million as at 31st December 2008 and had called for a review of the scheme to enable it function smoothly, even as scheme managers were being blamed for this. As the study draws attention these challenges, its findings could form a basis for informed policy direction and, effective management of the funds of the scheme, balanced and dispensed in a manner that fulfils the goals of quality health delivery to save lives.

2. THEORETICAL AND EMPIRICAL LITERATURE

2.1. Principles of Medical Ethics

There are four thematic principles to medical ethics. Of these four, the study finds two of the medical ethics rather interesting and relevant (Runzheimer and Larsen, 2013) The first being, "Beneficence" which actually indicates that, all health care providers must strive to improve their patient's health, to do the most good for the patient in every situation. It recognises that, "good" as

used should always be contextualised and not generalised. It also adds that, other values that might conflict with beneficence may need to be considered.

The other states that, principle of interest is "Justice". This principle actually demands that, as much fairness as possible should be extended when offering treatments to patients and scarce medical resources duly allocated with this in mind such that one's action would remain justifiable in every situation.

Despite the constraints they incur or endure from NHIS, operations of public hospitals need to take cognisance of these principles, primarily bearing in mind, the implications on patients.

2.2. Theory of Health Insurance

Nyman finds conventional explanation for purchasing insurance to be in conflict with explanations given by psychologists (Nyman, 1998). The former explains the rationale for purchasing insurance to be for reasons of transferring risk, whereas the latter explains that, people generally prefer the risk of no loss to the certainty of a smaller actuarially equivalent loss. Nyman explains conventional theory of insurance as holding that, people purchase insurance because they prefer the certainty of paying a small premium to the risk of getting sick and paying a large medical bill (Nyman, 2003) Same theory holds that, any additional health care that consumers purchase because they have insurance is not worth the cost of producing it, hence the co-payment and managed care policy system employed in some countries to reduce consumption of the additional seemingly low-valued care.

The new theory of consumer demand for health insurance holds that, people purchase insurance to obtain additional income when they become ill. It indicates that, regardless of risk issues, people prefer to purchase insurance with low premium, than the value of coverage of the insurance. It is believed that, tax subsidy has the capacity to reduce the effective premium to less than the actuarially fair cost of insurance (Nyman, 1998)

Nyman (2003) concludes that, health insurance is substantially more beneficial to consumers under the new theory, and that, co-payment cause more harm than good. He adds that, it further justifies the need to insure the uninsured for implementation of national health insurance (Nyman, 2003). As earlier indicated, the scheme in Ghana has seen increased patronage by way of purchase/registration over time. Health insurance purchasers have reasons for engaging that choice and have expectations that are beneficial by way of risk and cost, thus, the need for effective financial and administrative systems to guarantee this fulfilment.

2.3. Theory of Trade Credit

NHIS operate on credit as pubic hospitals render services for later recoupment and also engage suppliers for later payments. In looking at the theory of trade credit, a school of thought explains this theory as existing to decrease transaction costs of making payments on delivery (Ferris, 1981) An alternate school of thought explains this model as implying that, trade credit and bank credit

can be either complements or substitutes(Burkart and Ellingsen, The College of Information Sciences and Technology) By extension, trade credits just like bank credit have inbuilt interests in their costs, and that, it is engaged as an economically better option to payment on delivery. Following high dependence on funds from NHIA, the use of trade credits by public hospitals to sustain its operations cannot be deemed as free lunch. Again, the fact that public hospitals have no luxury of choice of discretion in this regard, but instead restrained by obligation is worth noting.

A study conducted in India on determinants of trade credit concluded that, firms' holdings of liquid assets have positive effect on accounts receivable, accounts payable, and net trade credit (Vaidya, 2011) Also, the study indicated that, firms with greater access to bank credit offer less trade credit to their customers, while firms with more access to bank funds do not extend it to customers by way of accounts receivables. Interestingly, firms with higher bank loans receive more trade credit. From Vaidya's work, there is indication that, the more liquid a firm is found to be, the more confidence trade creditors repose by extending trade credit. A cue from this findings is that, payments patterns of NHIA to public hospitals could persuade the latter's liquidity, which would in turn influence the willingness and risk factor their suppliers might consider in the course of business transactions, possibly even with the public hospitals.

2.4. Theory of Debt Management

Debt and credit are seen as same things looked at from different sides of the coin. Faraglia *et al.* (2008) indicate that, recent growing literature has focused on alternate approach to debt management, based on the idea that makes the determination of both fiscal policy and debt structure inextricable (Faraglia *et al.*, 2008) The approach is premised on the insight that a key influence on fiscal policy is the government's ability to offset unexpected fluctuations in government expenditure or revenue by managing the size, composition and value of debt. In a study on Search for Debt Theory, it concluded that it is very difficult to insulate fiscal policy from shocks by using the complete markets approach to debt management (Faraglia *et al.*, 2008)

The theory on optimal debt management have emphasised a number of goals overtime including, minimising costs, and minimising risks(Wolswijk and de Haan, unknown)

In the framework of public hospitals, the monopoly of the government in their circumstance cannot be overemphasised as services are predominantly provided based on NHIS and also on credit for that matter. The nationwide scale of operation and the legal backing of the scheme makes it feed significantly into the national debt, yet leaving individual public hospitals with no room for bargain. Government's disposition of employing fiscal policy to fund the scheme, which by scale affirms its monopoly, necessarily calls for need to ensure the its effective management and control of the schemes component of national revenue to prevent its misappropriation, so as to maintain government's capacity of fulfilling its debt obligations in this regard.

2.5. Public Finance Management System

Back in the 70s, Mascarenhas observed that, the general public reflected dislike to government's involvement in essential business activities, to the extent that they showed preference to market resource allocation mechanism against government intervention (Mascarenhas, 1991) The need for strong financial management reform for effective results in the public sector is critical, particularly for the purposes of this nationwide insurance scheme.

Newberry asserts that, financial management reform is structural to Public Management and that, employing a wide range of accounting techniques obtained from the private technique and refocusing parliamentary examination of management of government expenditure from input towards output assessment is useful (Newberry, 2002) As a lesson for public hospitals, firms with glowing long term prospects and healthy bottom line do not remain solvent without good liquidity management. Regrettably, in coping with liquidity challenges, public service organisations secure external trade financing at expensive cost.

In countries like Croatia where the share of loans in the total debt structure averages 78% as at 2008 in the local units of government, concerns have been raised with the untransparent and unfavourable terms within which these are accrued (Marko, 2011).

2.6. Working Capital Management Effects

In a study that looked at the relationship between Working Capital Management and Profitability at Tehran Stock Exchange, it was observed that, there is a reverse relationship between variables of working capital management (i.e. increasing collection cycle, debt payment period, inventory turnover and cash conversion cycle) and profitability (Ahmadi et al., 2012) Even as Makarani & Bineshian's work accordingly agrees with Ahmadi et al, they also conclude that, any reduction in debt payment could help create a better image with suppliers and vendor (Makarani and Bineshian, 2013)

2.7. Cash Conversion Cycle

Li explains business period as a process in which enterprises take the stock in, sell them, and take cash back, such that the length of business period is determined by the turnover of the stock and the turnover of accounts receivable. He adds that, the irrational existence of accounts receivable extends the business period which ultimately affects the enterprises' capital circulation (Li, 2008). Cash conversion cycle on the other hand is calculated as the total operating cycle minus the accounts payable period.

2.8. Accounts Receivable Period & Accounts Payable Period

Accounts receivable period or accounts payable period are the period counted by days, weeks or months taken to translate or a receivable into cash or effect payment for a payable respectively. In other words, the periods of accounts receivable (ARP) and accounts payable (APP) could also be

said to be the number of days it takes a business to get rid of these balances from its Statement of Financial Position. These are determined by the models Accounts Receivable/Turnover X 365 and Accounts Payable/Purchases X 365 for ARP and APP respectively. The longer the time lag between revenue and revenue receipt, the organisation misses out on having that cash available for paying off debt, and possibly stifling business operations.

In considering the integrated model of accounts receivable as developed by Lieber & Orgler, the major components of credit and collection policies, namely; cash discount; credit period; charges for late payment, and; losses from bad debts, affect credit terms on revenue (Lieber and Orgler, 1975) Given the size of government operation in the scheme of public hospital activities, legal framework, political influence among other factors, public hospitals could again be handicapped in applying such model. The situation is made more difficult particularly so, as profit maximisation is not the core essence of their operation, but can at best pursue optimisation. Finding a niche in Levy's believes that, it is possible to apply heuristics to solving problems relating to accounts receivable management satisfactorily, something could still be done in this regard (Levy, 1966) Mechanisms of risk management and total risk management as prescribed by Li (2008) to achieve decreased risks, guaranteed safety of business, expedited capital turnover, improved utilisation of capital with efficiency and profit maximization may be alien to public hospitals (Li, 2008)

2.9. Accounts Receivable Causes

Mei recognises accounts receivable as a normal and principal phenomenon in social economic life and proceeds to explain that, these are caused by four factors namely; (a) lack of risk consciousness; (b) lack of vigorous internal control; (c) weak law awareness and unsafeguarded own lawful rights and interest, and; (d)weak and unworkable financial regulations and management system (Mei, 2008) Increasingly, the need for public hospitals to explore the suggestions of Mei regarding factors (b) to (d) above as a way of exacting their due cannot be discounted.

2.10 Credit Policy And Debt Collection Models

Credit policy highlights a company's position on granting and collecting credit with the aim of maximising turnover. In an exploratory study regarding the commercial credit policy of Romanian Companies, where, it was revealed that average payment delays of the debts to the providers was higher than the average customer debt collection, it concluded that, commercial credit policy was not exerting significant influence over company liquidity (Fadur *et al.*, 2011) Mei, 2008 states that, firms make sensible scientific credit policy about accounts receivable and weigh marketing gains and due costs from the credit policy such that, earnings must go beyond added costs, with less security challenges (Mei, 2008)

In organisations where trade credit remains the most convenient way of financing activity, it is significant to stipulate terms and conditions of granting these to the borrower in the credit policy

(Wodynska, 2009) According to her, specifying repayment period, credit amount, interest rate and payment schedule are important in using to determine creditworthiness of customers.

In the case of public hospitals in Ghana, even as they find themselves at the mercy of a virtually monopolistic debtor who delays settlement of its debts in some cases for over a year, there is the legal obligation to provide NHIS services to clients, without recourse to the repayment period or credit policy which they have little or no control over. Habitual delays in payment to creditors are likely to stimulate costs in the pricing of medical products from suppliers as they would factor the time lag effect in payments.

Wodynska, 2007 prescribes two main debt collection models namely; (1) Internal debt collection model which assumes debt collections by employing organisational structures; and, (2) External Debt collection models, in other words, outsourcing to other bureaus to collect these on behalf of the organization (Wodynska, 2007) Wodynska proceeds to emphasise the need in the course of employing any or a mix of these models, organisations should ensure it is not done at the peril of the organisation's good name and market position.

3. THEORETICAL FRAMEWORK

The idea of exchanging goods or services in return for a promise of future payment developed after years of centuries of trade at a time when money and credit were unknown in human history (Credit Management Associatioin, 2013) At its introduction in 1300 B.C. the Babylonians and Assyrians traded among themselves on credit terms. Commencing that time to 1500 A.D., lending and borrowing developed alongside buying and selling on credit became widespread such that debtor-creditor relationship phenomenon was all across Italy among all classes of society from the peasants to nobles and has evolved till date such that we have debtors, creditors, cash and goods in business today which is called working capital.

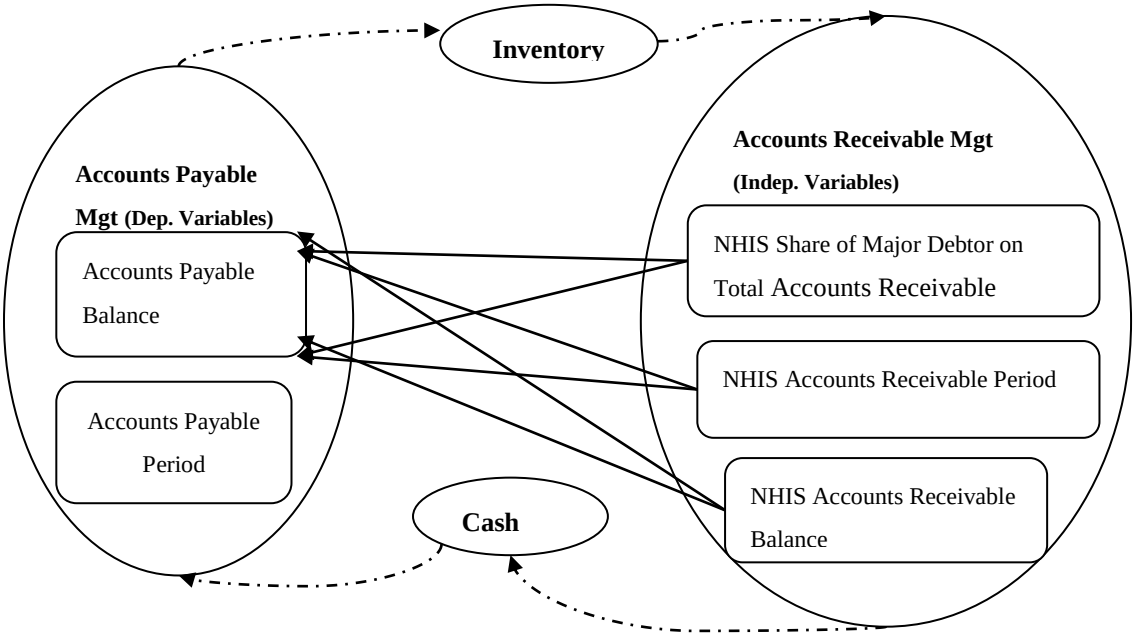
Working capital management is the administration of current assets and current liabilities (Acorn Professional Studies, 2013) The effective management of working capital ensures that the organisation maximises benefits from net current assets. Working capital management has a cycle that runs from inventory, to accounts receivable (Debtors) to cash to accounts payable (Creditors) to supply of inventory once again. In other words, the trade process is such that inventories are purchased on credit to create accounts payables (Trade Creditors), the sale of inventories is also made on credit to create accounts receivables (trade debtors), cash is collected from the accounts receivables (trade debtors) and the trade creditors are settled from that.

Accounts Receivables are assessed or managed using the accounts receivable (or debtors') structure, and size of accounts receivable balance (Lieber and Orgler, 1975; Li, 2008; Wodynska, 2009; Fadur *et al.*, 2011; Makarani and Bineshian, 2013) Similarly, Accounts Payables are assessed and managed using accounts payable period, and accounts payable balances.

The framework below, figure 1 depicts the relationship between the independent variables of Accounts Receivables (Debtors) and the dependent variables of Accounts Payables (Creditors) with

the dotted curved arrowed lines showing the flow of the working capital management cycle. The study focuses more on the straight line arrows which are not dotted to establish the relationship between the two, particularly in the context of NHIS related Accounts Receivable variables of Hospitals and Total Accounts Payables of Hospitals.

Figure-1. Effects of accounts receivable management on accounts payable management



4. METHODOLOGY

The target population for the study is public hospitals in Ghana. Even as data was requested from over 20 public hospitals from 3 out of 10 regions of Ghana, responses were received from only 10 hospitals. The study chose 3 of the 10 regions as it intended to focus on the southern sector of Ghana. These regions were randomly selected and the twenty hospitals were themselves randomly selected. Also, as data requested covered the period 2005 to 2011, not all hospitals were able to provide full data covering the periods requested, making the data unbalance panel data.

Dependent variables considered were; (1) The accounts payable balances of hospitals; and, (2) the accounts payable period of hospitals which were depicted as AccPayBalAll and AccPayPer respectively. The independent variables were; (a) NHIS's share of Total Credit Revenue structure; (b) Accounts Receivable balance on NHIS; (c) Accounts Receivable Period of NHIS (Lieber and Orgler, 1975; Li, 2008; Vaidya, 2011). These independent variables were depicted as NHISShareOfTotCreSal, AccRecBalNHIS, and AccRecPerNHIS respectively. The model function for the two dependent variables were respectively:

$$\mathbf{AccPayBalAll_{it}} = \beta_0 + \beta_1 NHISShareOfTotCreSal_{it} + \beta_2 AccRecPerNHIS_{it} + \beta_3 AccRecBalNHIS_{it} + u_{it}$$

Where: β_0 represents the constant;

β_1 , β_2 , and β_3 represent the coefficients of the three variables of $NHISShareOfTotCreSal_{it}$, $AccRecBalNHIS_{it}$, and $AccRecPerNHIS_{it}$ respectively of the various public hospitals (i) and for time (t), and; u_{it} represents the error term. And;

$$\mathbf{AccPayPer_{it}} = \alpha_0 + \alpha_1 NHISShareOfTotCreSal_{it} + \alpha_2 AccRecPerNHIS_{it} + \alpha_3 AccRecBalNHIS_{it} + u_{it}$$

Where: α_0 represents the constant;

α_1 , α_2 , and α_3 represent the coefficients of the three variables of $NHISShareOfTotCreSal_{it}$, $AccRecBalNHIS_{it}$, and $AccRecPerNHIS_{it}$ respectively of the various public hospitals (i) and time (t), and; u_{it} represents the error term.

Stata research software was used to run the panel data regression model. The study considered the fixed effect and random effect models but settled on the Generalised Least Squares (GLS) approach due to the violations of the OLS assumptions about the error term. The Generalised Least Squares (GLS) approach fits panel-data linear models by using feasible generalized least squares in the presence of AR(1) autocorrelation within panels and cross-sectional correlation and heteroskedasticity across panels. The challenge of eliciting data from facilities impacted on the data size, thus, acknowledging the need to generalise the conclusions of the study with circumspect.

5. ANALYSIS & FINDINGS

Table 1 presents an analysis of the effect of; (1) the share of NHIS in the composition of the structure of total credit sales (NHISShareOfTotCreSale); (2) the Accounts Receivable Period of NHIS (AccRecPerNHIS); and,(3) Accounts Receivable Balance of NHIS (AccRecBalNHIS), on Accounts Payable Balances (AccPayBalAll) of the public hospitals. The findings indicate that hypothesis B1 is true. In other words, Accounts Receivable Period of NHIS related debt has no statistical significance to Accounts Payable Balance of the public hospitals, an affront to Li's, 2008 conclusion that says, the extension of accounts receivable period ultimately affects the business' capital circulation, thus, suggesting an irrational management practice in the management of accounts receivable period on NHIS debts. However, hypothesis A1 and C1 were found not to be true. For hypothesis A1, it was actually found that, for every percentage increase in the share of NHIS debt on the overall total credit revenue generated by PHs, there was a potential decrease of GHC23,032 in the accounts payable balance of the hospitals, thus indicative that, PHs depend on high volumes of revenue from NHIS transactions to manage their indebtedness to suppliers, in spite of its poor recoverability effect on clearing payables. Poor as it may be, there is a relatively higher recoverability from NHIS credit transactions than the other forms of credits granted by the public hospitals such that, if there is a percentage increase in the share of Non NHIS share of total credit revenue transaction in the hospitals, it potentially decreases the accounts payable balance of the hospitals by GHC23,032, worrisomely making the non-NHIS debts the relatively, even worse managed component of the hospitals' debt structure. With respect to hypothesis C1, a unit increase in the accounts receivable balance of NHIS debt potentially increases the accounts payable balance

by 1.28 times. In other words, the effective management of NHIS' component of Accounts Receivables improves public hospitals' capacity of clearing their Accounts Payables, thus, a cue from Newberry, 2002 to manage the output of accounts payables from the inputs of accounts receivables relating to NHIS transactions.

From table 2, having conducted an analysis of hypotheses A2, B2 and C2 that looked at the effect of (4) Share of NHIS credit transactions of total credit revenue; (5)Accounts Receivable Period of NHIS debt; and, (6) Accounts Receivable Balance of NHIS debt respectively, on Accounts Payable Period of the public hospitals, hypothesis C2 was found true. In other words, increase or decrease in the proportion of NHIS receivables balances in the accounts receivable structure has no significant effect on accounts payable periods. However, hypothesis A2 and B2 were rejected, with the study revealing that, for A2, for every percentage increase in the share of NHIS share of credit revenue transactions of the public hospitals, there was an increase of 1.72 days in the Accounts Payable period of the public hospitals. Also for B2, for every increase of one day in the Accounts Receivable Period of NHIS debt to the hospitals, it increased accounts payable period by 2.59 days. By implication, failure of NHIA to meet its debt obligations to PHs on time translates into relatively increased extension or delays on the part of the hospitals to meet its debt obligations to suppliers. The findings, though similar to the Romanian companies' findings made by Fadur et al, 2011 where they concluded that, the commercial credit policy was not impacting on companies' liquidity, timely payment of NHIA receivables would translate into almost 3 times timelier payments to suppliers, thus, winning supplier confidence, improving supplier relationship, and, enjoying potential discounts to reduce the health delivery cost. The reverse is applicable.

6. CONCLUSION AND RECOMMENDATIONS

The study concludes that, Public Hospitals' management have been ineffective at managing the non-NHIS component of their debt structure in meeting its payable obligations to suppliers. The more NHIS component of accounts receivable balances increases, the more problematic it becomes for the hospitals in meeting its payable obligations. Further, failure of NHIA to meet its debt obligations to public hospitals on time translates into delays, almost three times longer on the part of the hospitals in meeting their debt obligations to suppliers. In other words, one problem on the part of NHIA creates, not just another problem, but a worsened effect on public hospitals and their suppliers.

As hospitals have little control over government policy, it is incumbent on government to agree on sustainable operable payment period terms so as not to grind hospitals to a halt nor compel them to revert to the dreaded cash & carry system, in their bid to address their frustrations in meeting payable obligations to suppliers.

Further, given the uncontrollable effect that public hospitals' management have over NHIS component of its receivables, the least management can do in effort to support its payables obligations is to ensure the non-NHIS component of its accounts receivable debt structure is

managed with utmost efficiency. As recognised by Mei, 2008 that lack of vigorous internal control and, weak and unworkable financial regulations and management systems are influencing factors to accounts receivables, it is imperative for government to reengineer the payment processes and, redefine the quality and roles of the acting entities (i.e. persons and agencies) in the value chain delivery processes, so as to shorten settlement periods for NHIA receivables, thus, adding to the quality of health delivery system most sought after.

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Table-1. NHIA Debt Effects on Accounts Payables Balances

```
Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        heteroskedastic
Correlation:   no autocorrelation

Estimated covariances      =         5          Number of obs      =        26
Estimated autocorrelations =         0          Number of groups   =         5
Estimated coefficients     =         4          Obs per group: min =         2
                                                               avg =       5.2
                                                               max =         7
                                                Wald chi2(3)       =     97.71
                                                Prob > chi2        =    0.0000
```

AccPayBalAll	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
NHISShareOfTotCreSale	-23032.05	3325.264	-6.93	0.000	-29549.45	-16514.65
AccRecPerNHIS	-2389.662	8448.103	-0.28	0.777	-18947.64	14168.32
AccRecBalNHIS	1.276331	.5723022	2.23	0.026	.154639	2.398022
_cons	2163384	528288.1	4.10	0.000	1127958	3198809

Table-2. Effect of NHIA Debts on Accounts Payable Periods

```
Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        heteroskedastic
Correlation:   no autocorrelation

Estimated covariances      =         5          Number of obs      =        26
Estimated autocorrelations =         0          Number of groups   =         5
Estimated coefficients     =         4          Obs per group: min =         2
                                                               avg =       5.2
                                                               max =         7
                                                Wald chi2(3)       =     36.17
                                                Prob > chi2        =    0.0000
```

AccPayPerAll	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
NHISShareOfTotCreSale	1.724868	.5878503	2.93	0.003	.5727031	2.877034
AccRecPerNHIS	2.586583	1.463585	1.77	0.077	-.2819914	5.455157
AccRecBalNHIS	-.0001078	.0000941	-1.15	0.252	-.0002924	.0000767
_cons	-118.4787	89.41697	-1.33	0.185	-293.7327	56.77534