AN ASSESMENT OF THE PERFORMANCE OF REFORM IN NIGERIA AND MALAYSIAN NATIONAL HEALTH SCHEME PROGRAMME

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Abstract

The study assesed the performance of health care and safety services reform in Nigeria and Malaysian National Health Scheme. Survey method of resaerch was adopted using questionnaire as the major tool of data collection. The data collected through the questionnaire method were subjected to Difference-in-Difference econometric statistical model analyses. The aim was to arrive at a conclusion on the comparative analysis of health care reform in the two countries (Nigeria and Malaysia), and as well between two periods (before and after reform). The findings revealed an impressive result supporting health care reform in the two countries. The comparative analysis also revealed a result showing the superiority of Malaysian healthcare reform over that of Nigeria. The result of performance testing of the reform before and after shows that the reform impacted positively on healthcare and safety services delivery to the employees in both Nigeria and Malaysia. The study concludes that, reform is one of the varitable tools to use in improving health care and safety services performance in Nigeria and Malaysia.

KEYWORDS: National Health Scheme, Difference-in-Differences, Safety Nets

1. 0 INTRODUCTION

A desire to evolve a system that will provide for a way of financing health care that would ensure the achievement of care that will prevents the deprivation of patient's due to their inability to pay is most important. An attempt at avoidance of wasteful spending and as a move to ensures health care that is geared towards reflecting the different demands of individual patients preoccupies most governmental health policies today. Reform as one of the instrument to ensure all the above were presented in different facets and style by differents government and policy making bodies in different countries. It is based on this desire that Nigeria evolve National Health Insurance Scheme as the main financing and galvanizing agents of its reform in healthcare sector, with focus on formal sector as base line finanacing source (NHIS Decree 35, 1999). The Malaysian government introduces the National Health Accounts and as well open up doors since 1980's to the operation of private health insurance outfits which gave birth to CUEPECS care as an example (Jamila, 2010; Abdurrahim, 2009; Nik & Daniel, 2009). The attempt to reform health care delivery was first initiated by the most developed countries such as USA, Canada and the coming together of most western European countries under OECD arrangement.

The main goal is to ensure equity, affordbility, accessibility, reduce waiting time and improve delivery efficiency (OECD, 2006/07; John, Allison, & Lisa, 2007). The universal, national health insurance systems created usually emvelope a clear goal of ensuring equity of health care to all at an affordable cost. Since 1980, more and more countries can no longer afford the commitment of public fund to finanacing complete health care for the whole population (Cutler, 2002). Many health economists' advocates and policymakers have resolved to evolve a new health insurance system with co-payment option. In addition to copayment option a public/private/ mixed insurance system or simply called parallel system, in which private health insurance will play an important role (Chernichovsky, 2000; Hurley et al, 2002), in meeting up with the ever increasing healthcare services demands of the citizens is sorted. Most of the previous studies focused on the healthcare reform of developed countries, such as the United States, the Germany, OECD and Canada, etc.

The analysis of health care and health insurance systems in emerging markets especially in Nigeria (Africa) and Malaysia (East Asia) is very limited which make this study relevant at this period. Therefore, this study focuses on assessing the performance of the new healthcare market in Nigeria and Malaysia, with special attention to services rendered by both public and private providers in the two countries, and at the same time compares same in the two countries, using before and after indices.

2. 0 LITERATURE REVIEW

Previous research was conducted to determine whether or not reform has any positive impact on the issue of access, there was no discrimination as to whether the healthcare and safety services is provided by the public with partial commercialization or private-for-profit. To do that, number of physician visits was measured with a self administered questionnaire, with questions such as "During the past twelve month about how many times did you see or talk to medical doctor about your health?. In 1998 a mean of 3.7 was obtained. Another question has to do with the medication and a question "Are you currently taking prescribed medication if yes then; how many different prescribed medication do you now take? Those who answer no were coded (0), the number of prescribed medication ranged from 0 to 11 or more, a mean of 1.41 was obtained (Catherine & John, 2000).

In addition to the above research, the study conducted by Nik and Daniel, (2009), revealed that in 1983, private insurance played a very little role in the provision of healthcare and safety services in Malaysia with only 1.5percent of the population being covered by private healthcare and safety providers. But the change in government policy to support private public partnership led to an expansion of private clinic participation in Malaysia to up to 15 percent in 1995, 18.8 percent of the population aged 18 and above in 2006 have registration with private healthcare and safety outfits. In Nigeria the out-of-pocket healthcare and safety expenses by the general population constituted over 70 percent of the healthcare and safety finances which necessitated the evolution of the new National Health Insurance Scheme, to serve as a bridge between the working class and the poor population, with plan for the working class to susidized for the poor population (WHO, 2007; Labiran et at., 2008; Dogo, 2009).

A similar study which uses correlation in some developing countries such as, Senegal, Thailand, India, and Rwanda shows a less than 0.1 percent significant point effects (Johannes, 2004). The problem of equity is one of the greatests challenges in most reforms that has relationship with healthcare and safety in most of the developed world, developing nations inclusive. In America for instance Blacks and Hispanic are bitter specifically on issue of equal treatment of equal or unequal treatment of unequal (Nicholas, 2006). Bernerd, Pedro and Bultman, (2004); David, Matthian and Claude, (2004), conducted a similar study that treated the issue of efficiency, effectiveness and equity, as a results of reform on healthcare and safety delivery and the study succeeded in obtaining similar results with this research.

Manfred, Andre and Wendy, (2004) highlighted on the issue of responsiveness which is otherwise defined as efficiency, patient satisfaction which is also defined as efficiency, outcomes refering to equity, which tends to agree with the results of this research. Study conducted in Europe prior to the coming of the tax-funded system of health Care in Denmark, Italy, Portugal, Greece, and Spain, in the year 1973, 1978, 1979, 1983, and 1986 respectively, show an arguement for or against, which revealed a rather conflicting results with some reporting positive effects of private insurance as done by this research and with little challenges awaiting the publically owned health and safety insurance outfits (Catherine and John, 2000; Richard, 2004)). On whether or not universal insurance would improve health of the population, this position was seriously querried (Sylverson, Charkin, & Atrash et al., 1991).

From the previous studies Simon, (2004) submits that any prediction using pre-reform and post-reform data comparison or from one healthcare and safety insurance type to another using a simple comparison technique, may tends to find out that stringent law against providers has the potentiality of reducing coverage which will translates into service inequality. Commenting on the American healthcare reform Simon, (2004), states that, to simply agree that if the reform had not been put in place coverage would have stabilize is to say the least that the reform is a failure. An analysis conducted on the reform by US states department of insurance shows that, 40 percent of the consumers saw their premium fall by certain amount. And on the other way round prices increased for the younger consumers, this act provided more access for older consumers and inequality for younger consumers.

This study show a clear test for the hypothesis that community rating reduces coverage by driving lower risks (young) consumers from having access through premium charges inequality (DiNardo & Buchmueller,2004). From the point of view of efficiency reform has sought to create a market environment in which insurers would compete on the basis of health plans, cost, and equity through improved risk management rather than through risk selection (Hall, 1992). In another research it was revealed that from the equity point of view, reform has sought to encourage a reverse from the issue of co-modification of healthcare and safety as well as health insurance to the promotion of an alternative vision in which distribution of coverage is consistent with principles of social solidarity and mutual aid rather than acturial fairness (Stone, 2004; Oliver & Fiedler, 2004). The conclusion of the research conducted by Marrie-Pascale et al. (2007) believe that, the only innovation that will help in ensuring the success of any reform, inorder to meet up the goals of equitable access, and affordable drugs in addition to meeting the challenges of cost containment and efficient delivery of services, is an accompanying policy of reform with evaluation and adjustment during implementation.

A research conducted to test the realtionship between hospital bill and insurance coverage in Malaysia revealed a significant value of 0.327, where $p>0.05$. The reults above revealed a no relationship between bill and insurance coverage. This study applied Pearson correlation tests to obtain the results. In the study using ANOVA to asses 41 hospitals admission in Malaysia revealed that hospital charges based on admission ranged from 42 percent doctors charges, 36 percent facility charges, medication has 14 percent, while the least fee being room charges with 8 percent (Nik & Daniel, (2009); Nicholas, (2006), conducted a research on those Americans popularly called the tweeners. The research revealed that majority of the tweeners have access to healthcare and safety facilities but find it difficult to afford the premium. The tweeners are those citizens whom private insurance is obtainable but not affordable. A research conducted by Catherine and John, (2000), revealed that one way of determining access to healthcare and safety services by the employee is through self reported questionnaire which will show case the number of time an employee attends or have access to doctor. This research administered self reported question thus; in relation to number of physician visits 'During the past 12 month about how many times did you see or talk to medical doctor about your health? The results of this research revealed 3.74 mean value point.

The second question has to do with medication, Are you currently taking prescribed medications for any health problems; if yes; then how many differents prescribed medication do you now take? The mean value point for this research revealed 1.41. This shows the state of relationship between access to hospital and medication in a reform situation (Catherine & John, 2000). And finally, in another research which try to asses the level of bias in selection and access to healthcare and safety services. It was reported that 19 percent of the patient with coverage reported that, they and their families had three or fewer visits, 32 percent reported four to six visits and 49 percent reported seven or more visits. This show high level of access to healthcare and safety services (Pamela et at., 2004). In another study conducted in the United States and Canada, to determine the cost of health care in relation to administrative charges, costs of health insurers, employers' health benefit programs, hospitals or facilities charges, practitioners' charges, nursing home care services charges, revealed an interesting result. The study uses and analyzed a secondary data, surveys of physicians employment data, as well as cost reports filed by hospitals, nursing homes,and home care services providers. The analysis excluded the parts that involved administrative share of health care spending, retail pharmacy sales and a few other categories due to lack of data on the real administrative costs. The study used census surveys to explore trends over time in administrative and employment in health care settings. Costs are reported in U.S. dollars.

The results revealed health administrative cost of at least $294.3 billion in the United States, or $1,059 per capita, as compared with $307 per capita in Canada. After exclusions, of other charges, administration accounted for 31.0 percent of health care expenditures in the United States and 16.7 percent of health care expenditures in Canada. Canada's national health insurance program had overhead of 1.3 percent; the overhead among Canada's private insurers was higher than that in the United States with 13.2 percent and 11.7 percent. At the same time providers'administrative charges were far lower in Canada as compared with the United States (OECD, 2006/2007; John, Allison, & Lisa, 2007).

Acording to John, et al., (2007) the healthcare labour force accounted for by the administrative records in the American and Canadian healthcare workforce as from 1969 and 1999 are between 18.2 to 19.1 percent of the total health workforce. This number grew further in 1971 and 1996 with 27.3 percent and 19.1 respectively in both countries. It was therefore concluded that should the administrative cost be trimmed the system would have benefitted and improve tremendously.

3. 0 RESEARCH METHOD

In an evaluation research, the major statistical components form the basis of the research design which includes both the sampling plan and the estimation procedures. The sampling plan is the methodology used for selecting the sample from the population. The estimation procedures are the algorithms or formulae used for obtaining estimates of population values from the sample data and for estimating the reliability of these population estimates (Levy & Lemeshow, 2008)

3.1 Sample Size Determination

In this research design, having considered all the factors involved, the stratified random sampling with proportional allocation is the chosen sampling design. A sample is a part, of a fraction, or a subset of the population. Samples are usually drawn with the aim of estimating the population quantities. Sampling is the act of drawing samples from the population; which saves time and cost. Usually *n* units are selected from the entire *N* units of the population. In this case, *n* is called the sample size. In this research work, samples will be drawn from the target population based on a statistically determined, efficient sample size so as to estimate some parameters of the population. In this research six samples were taken each using a stratified random sampling and proportionate probability. The institutions so selected were the strata representing the medical experts, safety experts, and the beneficiaries of healthcare and safety services in the two countries. The selected stratum is as follows: Ahmadu Bello University, Bayero University, Kaduna Polytechnic (Kaduna city universlty), Shehu Idris College of Health Technology, American Universlty (AUNigeria) and Private and Public Clinics in Nigeria. Universiti Malaya, Universiti Utara Malaysia, Universiti Sains Malaysia, Cyberjaya University College of Medical Sciences Malaysia, and public/private Clinics in malaysia.

The determination of sample size is a common task for many organizational researchers. Inappropriate, inadequate, or excessive sample sizes continue to influence the quality and accuracy of research. A formula for selecting the sample size for a research problem based on a level of significance and a set error rate was proposed by Cochran, (1977). In order to obtain the most efficient, representative sample, for our research, we use the following Cochran's formula for sample size determination:

$$n = \left(\frac{Z_{\alpha/2}\hat{\sigma}}{\delta} \right)^2$$

Where;

n = Sample size

$Z_{\alpha/2}$ = the value of the standard normal ordinate at $\alpha\%$ level of significance

Hence, at the 5% level of significance, we can compute the value as;

$Z_{\alpha/2} = Z_{0.025} = 1.96$

δ = is the chosen error rate; we can set $\delta = 0.03$

$\hat{\sigma}$ = the estimated population standard deviation (for educational level)=0.411

The following table depicts the value of the sample standard deviation which is an estimator for the population standard deviation.

3.2 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Highest Educational Achievement	***290***	***4***	***5***	***4.21***	***0.411***
Valid N (listwise)	***290***				

$$n = \left(\frac{Z_{\alpha/2}\hat{\sigma}}{\delta} \right)^2 = \left(\frac{1.96 \times 0.411}{0.03} \right)^2 = 721$$

That is, we need a sample size of at least 721 to arrive at a sample with a sampling error of at most 3%. Hence, for convenience, we shall take our sample size to be 750. Based on the above computation, this study needed 750 respondents to complete the survey using the questionnaire instrument. This size range was as suggested by Ferketich, (1991) & Dillman, (2000), in that the size of 200-300 should be considered for a survey.

It was within the sample frame of plus or minus 5% margin errors based on the formular and sample size table of Krejgie & Morgan, (1970). Normally "p" is set at 0.01 or 0.05 for more homogeneous sample (Dill man, 2000). However, using 0.05 would lead to a larger sample size therefore, 0.05 was choosen and used in this research (Weaver, 2006) though it always provides enough sample size for smaller or larger population (Bruns et, al., 2003; & Lyberg, 2003).

3.3 Difference-in-Difference (DD) Models

In order to apply the difference-in-difference model, we need to record the responses on the five Likert scales into binary variables indicating the impact of the NHS scheme or otherwise; for both Nigeria and Malaysia. We could obtain the difference-in-difference model through the regression model with binary regressors with a single dependent variable. One of the most useful devices in regression analysis, especially for DD models, is the binary or dummy variable. A dummy variable takes the value one for some observations to indicate the presence of an effect or membership of a group and zero for the remaining observations. Binary variables are a convenient means of building discrete shift of the function into a regression model (Green, 2003). Dummy variables are usually used in regression equations that also contain other quantitative variables. In recent applications, researchers in many fields have studied the effects of treatment on some kind of response. Examples include the effect of education on income, sex difference in labour supply (or salary), pre-versus post regime shift in microeconomic models, to mention but a few. These examples can all be formulated in regression model involving a single dummy variable. Thus; $Y_i = X_i^{'}\beta + \delta D_i + \varepsilon_i$.

When there are several categories, a set of binary variable is necessary. Correcting for seasonal factors in microeconomic data is a common application. We could write a consumption function for quarterly data in the form below:

$$C_t = \beta_0 + \beta_1 X_t + \delta_1 D_{t1} + \delta_2 D_{t2} + \delta_3 D_{t3} + \varepsilon_t$$

Where; $X_t =$ Disposable income

Here, only three of the four quarterly dummy variables are included in the model. If the fourth were included, then the four dummy variables would sum to one at every observation, which would reproduce the constant term – a case of perfect multicollinearity. This is known as the dummy variable trap. Thus to avoid the dummy variable trap, we drop the variable for the fourth quarter. Any of the four quarters can be used as the base period (also called the reference category). In this case, the required DD model is of the form:

$$Y_i = \beta_0 + \beta_1 P + \beta_2 N + \beta_3 (P * N) + e_i$$

Where;

Y_i is the average response with respect to the efficacy of the scheme

P is the period dummy for the NHS scheme

N is the country dummy for Nigeria

$P*N$ is the interaction of the period and Nigeria's dummy

e_i is the random error component

The difference-in-difference model is therefore the process of building multiple regression models with binary regressors using the method of least squares. Hence, the required regression model is of the form given below:

$$Y_i = \beta_0 + \beta_1 D_{1i} + \beta_2 D_{2i} + \varepsilon_i$$

Where;

$Y_i =$ is the average response with respect to the efficacy of the scheme

$\beta_0 =$ Population regression constant

$\beta_1 =$ Population regression coefficient for country

$\beta_2 =$ Population regression coefficient for period

$\varepsilon_i \sim N(0, \sigma^2) =$ Random error component

Equation above is always estimated by the model given below:

$$\hat{Y}_i = \hat{\beta}_0 + \hat{\beta}_1 D_{1i} + \hat{\beta}_2 D_{2i}$$

Where;

$\hat{Y}_i$ = Estimated average response with respect to the efficacy of the scheme

$\hat{\beta}_0$ = Estimated regression constant

$\hat{\beta}_1$ = Estimated regression coefficient for country

$\hat{\beta}_2$ = Estimated regression coefficient for period

D_{1i} = Country ($D_{1i} = 1$ Nigeria and $D_{1i} = 0$ Malaysia)

D_{2i} = Period ($D_{2i} = 1$ after the NHS scheme and $D_{2i} = 0$ before the scheme)

The method of difference-in-difference model via the multiple regression models was used for analyzing the part of the data. In addition, difference-in-difference coefficients, various statistical inferences and diagnostic methods were computed and compared. The Statistical Package for Social Sciences ($SPSS$) was employed for the analysis. Recall the estimated model above: $\hat{Y}_i = \hat{\beta}_0 + \hat{\beta}_1 D_{1i} + \hat{\beta}_2 D_{2i}$ .Where the parameters are obtained through the method of least squares by solving the following systems of normal equations:

$$\sum_{i=1}^{n} \hat{Y}_i = \hat{\beta}_0 n + \hat{\beta}_1 \sum_{i=1}^{n} D_{1i} + \hat{\beta}_2 \sum_{i=1}^{n} D_{2i} \quad (1)$$

$$\sum_{i=1}^{n} D_{1i}\hat{Y}_i = \hat{\beta}_0 \sum_{i=1}^{n} D_{1i} + \hat{\beta}_1 \sum_{i=1}^{n} D_{1i}^2 + \hat{\beta}_2 \sum_{i=1}^{n} D_{1i} D_{2i} \quad (2)$$

$$\sum_{i=1}^{n} D_{2i}\hat{Y}_i = \hat{\beta}_0 \sum_{i=1}^{n} D_{2i} + \hat{\beta}_1 \sum_{i=1}^{n} D_{1i} D_{2i} + \hat{\beta}_2 \sum_{i=1}^{n} D_{2i}^2 \quad (3)$$

Automated solution increases accuracy, precision and speed. Hence the bulk of the calculations will be done by $SPSS$. Automated solution increases accuracy, precision and speed. Hence the bulk of the calculations will be done by $SPSS$.

4.0 RESULTS PRESENTATION

Aim

The aim here is to compare, between Nigeria and Malaysia, as well before and after the NHS scheme, whether employees are treated well in private clinic more than in public clinic. The DD technique through a linear regression model is hereby employed for the analysis, indicated in the Difference-in-Difference Coefficients 1 and Difference-in-Difference ANOVA

4.1 Conclusion 1

From the ANOVA table in the appendixe, the *p-value (0.000)* implies that all the *DD* regression coefficients are statistically significant. Hence, from the coefficient table, $\beta_1 = 26.452$ implies that Malaysian employees are treated well in private clinic more than in public with the recent development in healthcare sector more than Nigerian employees. Also from the coefficient table, $\beta_2 = 0.462$ implies that after the NHS scheme employees are treated well in private clinics more than in public clinics than before the scheme. The standardized coefficient $\beta_1' = 0.624$ implies that Malaysian employees are 62.4% better treated in private clinic more than in public with the recent development in healthcare sector more than Nigerian employees. Also standardized coefficient $\beta_2' = 0.010$ implies that after the NHS scheme employees are 1.0% better treated in private clinics more than in public clinics than before the scheme.

Aim

To compare, between Nigeria and Malaysia, as well before and after the NHS scheme, whether the efficiency provided in the recent development as from 2006 in the health sector will ensures equity, safety and healthcare services to employees in the working place. The DD technique through a linear regression model is hereby employed for the analysis.

4.2 Conclusion 2

From the ANOVA table in the appendix, the *p-value (0.000)* implies that all the *DD* regression coefficients are statistically significant. Hence, from the coefficient table, $\beta_1 = 26.487$ implies that the efficiency provided in the recent development as from 2006 in the health sector in Malaysia has ensured equity, safety and healthcare services to employees in the working place more than in Nigeria. Also from the coefficient table, $\beta_2 = 0.186$ implies that the is efficiency provided in the recent development as from 2006 in the health sector has ensured equity, safety and healthcare services to employees in the working place more than before the scheme. The standardized coefficient $\beta_1' = 0.625$ implies that Malaysian scheme is 62.5% more than Nigeria in terms of the efficiency provided in the recent development as from 2006 in the health sector to ensure equity, safety and healthcare services to employees in the working place. Also standardized coefficient $\beta_2' = 0.010$ implies that the efficiency is 0.1% better than before the scheme.

Aim

To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether reform in healthcare sector will ensures equity and affordability to healthcare and safety services to all employees in Nigeria and Malaysia. The DD technique through a linear regression model is hereby employed for the analysis.

4.3 Conclusion 3

From the ANOVA table in the appendix, the *p-value (0.000)* implies that all the *DD* regression coefficients are statistically significant. Hence, from the coefficient table, $\beta_1 = 26.566$ implies that the efficiency provided in the recent development in healthcare sector in Malaysia has ensured equity to healthcare services to all employees in their working place more than in Nigerian. Also from the coefficient table, $\beta_2 = 3.487$ implies that there is efficiency provided in the recent development in healthcare sector which will ensure equity to healthcare services to all employees in their working place more than before the scheme. The standardized coefficient $\beta_1' = 0.627$ implies that Malaysian scheme is 62.7% more than Nigeria in terms of the efficiency provided in the recent development as from 2006 in the health sector to ensure equity to employees in the working place. Also standardized coefficient $\beta_2' = 0.049$ implies that the efficiency is 4.9% better than before the scheme.

Aim

To compare, between Nigeria and Malaysia, as well before and after the NHS scheme, whether the recent development in healthcare sector will successfully increases the number of time employees will attends hospital/clinics in the working place. The DD technique through a linear regression model is hereby employed for the analysis.

4.4 Conclusion 4

From the ANOVA table in the appendix, the *p-value (0.000)* implies that all the *DD* regression coefficients are statistically significant. Hence, from the coefficient table, $\beta_1 = 26.831$ implies that the recent development in healthcare sector has successfully increased the number of time employees will attends hospital/clinics in Malaysia in their working place more than in Nigeria. Also from the coefficient table, $\beta_2 = 3.960$ implies that the recent development in healthcare sector will successfully increases the number of time employees will attends hospital/clinics in the working place than before. The standardized coefficient $\beta_1' = 0.633$ implies that Malaysian attendance rate is 63.3% more than Nigeria. Also standardized coefficient $\beta_2' = 0.080$ implies that the attendance rate now is 8.0% better than before the scheme.

Aim

To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the recent development will ensures better access to health care services to employees than without it. The DD technique through a linear regression model is hereby employed for the analysis.

4.5 Conclusion 5

From the ANOVA table in the appendix, the *p-value (0.000)* implies that all the *DD* regression coefficients are statistically significant.

Hence, from the coefficient table, $\beta_1 = 26.558$ implies that the recent development has ensured better access to health care services to employees in Malaysia more than in Nigeria. Also from the coefficient table, $\beta_2 = 3.817$ implies that the recent development has ensured better access to health care services to employees than without it more than before. The standardized coefficient $\beta_1' = 0.627$ implies that Malaysian access rate is 62.7% more than Nigeria. Also standardized coefficient $\beta_2' = 0.050$ implies that the access rate now is 5.0% better than before the scheme.

5.0 SUMMARY DISCUSSION AND CONCLUSION

This study makes contribution to the development of literature on Nigeria and Malaysian National Healthcare Scheme reform. It also contributed to the development of methodological approach to health care reform studies using econometric instruments or tool of analysis. It has also applied difference-in-difference method using questionnaire acquired data; this will serve as secondary data for future research endeavour. The study regressed healthcare and safety services efficiency (dependent variable) on healthcare and safety access, equity, affordability and governmental control mechanisms of reform (independent variable). All the results impressively supported the alternative hypotheses prediction with a positive result of reform effects on all the parameters.

The first effect of reform is on the treatment efficiency and meeting up with the satisfaction of employees, the results shows a coefficient value positively supporting the prediction that, employees are treated well in private clinics more than in public clinics with reform in Malaysia more than in Nigeria. The coefficient value (β^2) shows that employees in both Nigeria and Malaysia are treated well in private clinics more than in public after reform than before the reform. The standardise coefficient shows that Malaysian employees are 62.4 percent better treated in private clinics than public compared to Nigerian employees. In general the standardise coefficient shows in both Nigeria and Malaysia there is 1.0 percent better treatment of employees in the private clinics than in the public. The results supported the alternate hypotheses that, there is significant relationship between efficiency of healthcare and safety services delivery in the private clinics than in the public clinics.

The second part of the model revealed a positive relationship between reform and healthcare and safety delivery efficiency in both Nigeria and Malaysia. The results from the regression shows a positive coefficient indicating that reform has ensured equity, safety, and healthcare and safety delivery services to the employees in the working place in Malaysia more than in Nigeria. The coefficient value (β^2) show an impressive outcome that the reform supported the efficiency provided by the reform ensured equity of healthcare and safety services to the employees than before the reform. While, the standardised coefficients implies that, the effects of the reform is 62.7 percent more than in Nigeria in 2006 and it generally shows a standardised coefficient converted to percentage to be 4.9 percent better than befrore the reform in both Nigeria and Malaysia prior to 2006. The results also positively supporte the alternative hypotheses that, there is significant relationship between governemental control mechanisms and improvement of healthcare and safety access and equity of healthcare and safety services to the employees.

The results of the study also tested whether reform efficiency as a dependent variable have successfully influence the frequency (affordability, access) of clinic attendance by the employees, in both Nigeria and Malaysia. The results of the coefficient of the regression analysis shows that reform has increased the frequency of employees clinic attendance in both Nigeria and Malaysia, with Malaysia having an edge over Nigeria. The (β^2) coefficient value shows that reform will continue to increase affordability and access to employees in various working places in the two countries than before the reform. The standardize coefficient shows that Malaysian employees has 63.3 percent more frequency of affordability and access to healthcare services attendance by the employees than the Nigerian employees. It generally shows that in both countries there is 8.0 percent attendance rate increase now than before the reform. The results of this study supported the initial alternative hypotheses or prediction that; there is correlation between healthcare and safety cost, affordability and efficiency to employees in Nigeria and Malaysia.

The final results analysis tests whether reform has effects on access to healthcare and safety services in general to the employees, the results show a p-value=(0.000) which is significant, and the coefficient value B1 shows that there is better access in healthcare and safety services to rhe employees in Malaysia than in Nigeria. The (β^2) value shows that reform succeeded in ensuring access to healthcare and safety services to the employees more than before the reform.

The standardize coefficient shows access rate of 6.2.7 percent in Malaysia more than in Nigeria. The standardize coefficient for the general assesment of the reform in both Nigeria and Malaysia shows 5.0 percent better access rate than before the reform. These results also supported the alternate hypotheses that reform has succeeded in improving access than without it in the two conutries.

5.1 CONCLUSION

Conclusively, this research is an ongoing one, the future study will focus on gathering longitudinal data to asses the long time effect or impact of the reform in both Nigeria and Malaysia. Consideration is also going to be on the effect or impact of reform on demographic variables, such as gender, income, employment type, educational level, lifestyle (drunkardness, family size, smoking, employment type) in the future study. The impact of governmental control mechanism on the reform parameters and major actors (such as, HMO's, healthcare and safety service providers, health insurance service providers, health facilities) on whether or not have succeeded in improving healthcare and safety services delivery efficiency, cost reduction and/or affordability to an accessible healthcare and safety services to the employees in Nigeria and Malaysian formal and informal sector employees should preoccufy future research. The possibility of researching on the development of safetynet services to the poor, unemployed, retirees, and underpriviledge citizens, through safetynet fund raising through government agencies, private organizatins as a social and community responsibility function to improve healthcare services delivery to all should be considered in the future in both Nigeria and Malasia.

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Table 1. Difference-in-Difference Coefficients 1

	Unstandardized Coefficients		**Standardized Coefficients**		
Model	B	Std. Error	Beta	T	Sig.
(Constant)	9.860	2.839		3.473	0.001
Country	26.452	1.213	0.624	21.814	0.000
Employees are treated well in private clinic more than in public with the recent development in healthcare sector.	0.462	1.349	0.010	0.342	0.732

Difference-in-Difference ANOVA 1

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	116911.315	2	58455.658	239.728	0.000
Residual	182149.444	747	243.841		
Total	299060.759	749			

Table 2. Difference-in-Difference Coefficients 2

	Unstandardized Coefficients		**Standardized Coefficients**	T	
Model	B	Std. Error	Beta		Sig.
(Constant)	10.987	4.382		2.507	0.012
Country	26.487	1.211	0.625	21.873	0.000
The efficiency provided in the recent development as from 2006 in the health sector will ensures equity, safety and healthcare services to employees in the working place.	0.186	2.137	0.002	0.087	0.931

Difference-in-Difference ANOVA 2

Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	116884.566	2	58442.283	239.638	0.000
Residual	182176.193	747	243.877		
Total	299060.759	749			

Table 3 Difference-in-Difference Coefficients 3

	Unstandardized Coefficients		**Standardized Coefficients**		
Model	B	Std. Error	Beta	T	Sig.
(Constant)	17.191	4.147		4.145	0.000
Country	26.566	1.208	0.627	21.988	0.000
The recent development in healthcare sector will ensures equity to healthcare services to all employees in their working place.	3.487	2.010	0.049	1.734	0.083

Difference-in-Difference ANOVA 3

Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	117613.307	2	58806.654	242.101	0.000
Residual	181447.451	747	242.902		
Total	299060.759	749			

Table 4 Difference-in-Difference Coefficients 4

	Unstandardized Coefficients		**Standardized Coefficients**		
Model	B	Std. Error	Beta	T	Sig.
(Constant)	17.273	2.910		5.936	0.000
Country	26.831	1.210	0.633	22.180	0.000
The recent development in healthcare sector will successfully increases the number of time employees will attends hospital/clinics in the working place.	3.960	1.408	0.080	2.812	0.005

Difference-in-Difference ANOVA 4

Model	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Regression	118791.104	2	59395.552	246.123	0.000
Residual	180269.654	747	241.325		
Total	299060.759	749			

Table 5 Difference-in-Difference Coefficients 5

	Unstandardized Coefficients		**Standardized Coefficients**		
Model	B	Std. Error	Beta	T	Sig.
(Constant)	17.888	4.488		3.986	0.000
Country	26.558	1.208	0.627	21.986	0.000
The recent development will ensures better access to health care services to employees than without it.	3.817	2.184	0.050	1.747	0.081

Difference-in-Difference ANOVA 5

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	117624.267	2	58812.134	242.138	0.000
Residual	181436.491	747	242.887		
Total	299060.759	749			