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Garissa Township**



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Funding Strategies on Performance of Health Insurance in Kenya: A Case of National Hospital Insurance Fund in Garissa Township

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Abstract

Purpose: The purpose of this study is to evaluate the impact of funding strategies on performance of Kenya's health insurance, in Garissa Township. This study is guided by three objectives: to find out the relationship between members' contributions on performance of National Hospital Insurance Fund in Garissa Township, Kenya; to determine the relationship between out-of-pocket contributions on performance of National Hospital Insurance Fund in Garissa Township, Kenya and to examine the relationship between government contributions on the performance National Hospital Insurance Fund in Garissa Township, Kenya. The scholars, decision-makers and private future researchers will all benefit from the research's conclusions.

Methodology: The study is framed on quantitative research approach. It is anchored on resource-based theory, financial health theory as well as the performance theory. The study used a descriptive research design to seek the opinion of respondents on the funding strategies on the performance of NHIF. The total target population is 242 respondents while 151 respondents formed the sample of the study. Primary data was collected by use of structured questionnaires and interviews. Validity was carried out through content validity. Reliability of the research instruments was done using testing and pretesting questionnaires to the same group within duration of one week interval.

Findings: Data analysis constituted both descriptive and inferential statistics. A regression model was used to determine the relationship between independent and dependent variables. The hypothesis was tested at a confidence level of 0.05 using convenient inferential statistics. Analyzed data was presented using suitable tables and figures based on APA format.

Unique contribution to theory, policy and practice: The study concludes that deficiencies include issues like inadequate management of capital structure, ineffective handling of cash flows, and suboptimal strategies for cost recovery. Further, the government should prioritize investment in health infrastructure and human resources to improve the accessibility and quality of healthcare services across the country.

Keywords: *Funding Strategies, Members' Contributions, Out-of-Pocket Contributions, Government Contributions and National Hospital Insurance Fund*

Background of the Study

All throughout the world, health insurance schemes have been established to provide access to healthcare services to the people. The degree of performance of this differs from nation to nation. (OECD, 2018). In Germany, health services are funded through compulsory contributions to health funds. These are non-profit making organizations operating either over a particular geographical area or for particular occupational groups. Although nominally independent, the system is tightly regulated by state governments. Money is reallocated between funds to take account of differences in the incomes and the risk profiles of their members. Self-employed physicians and a mixture of government and private hospitals provide healthcare. Coverage extends to almost the whole population. Employers and employees make contributions to the health fund, and are both represented on the boards of the funds. Nearly everyone residing in Germany is guaranteed access to high quality comprehensive healthcare. The healthcare system has achieved a high degree of equity and justice, despite its fragmented federal organization. Universality of coverage, comprehensive benefits, the principle of the healthy paying for the sick, and a redistributive element in the financing of healthcare have been endorsed by all political parties and are secured in the Basic Law, therefore addressing the equity issue (Schengen visa, 2023; Expatrio, 2023; European Observatory, 2021)

In the USA, the government intervenes in the healthcare industry through a number of separate programmes, in contrast to many other countries where the government provides universal medical insurance. Two main programmes, Medicaid and Medicare, provide government medical insurance for the poor and the elderly, respectively. A third important programme provides tax breaks for employer-paid medical insurance and healthcare spending for employees. Medicaid pays healthcare expenses of families with low incomes and without assets. In all states, covered services include acute care in hospitals, dental services, optometry, prescription drugs, and home healthcare in some states. Although federal and state governments share the cost of Medicaid, the programme is administered by the state, subject to federal guidelines. Only people who are needy are eligible for Medicaid (Keiser-Starkey & Bunch, 2021). In Egypt, the healthcare system is pluralistic, comprising a variety of healthcare providers from the public as well as the private sector. The government ensures basic universal health coverage, although private services are also available for those with the ability to pay. Due to social and economic pressures, Egypt's healthcare system is subject to many challenges. However, several recent efforts have been directed towards enhancing the system (Universal Health Coverage, 2021).

The Health Insurance Organization (HIO) of Egypt is prominent among the many institutions involved in health financing and provision, and a key player in the country's health sector reform programme. It was established in 1964 as the institution in Egypt responsible for social health insurance, providing compulsory health insurance to workers in the formal sector. The HIO is an autonomous government organization under the supervision of the Minister of Health and Population. It finances healthcare services through a combination of payroll and cigarette taxes, and delivers healthcare services through its own network of hospitals, clinics, and pharmacies and

through contracting private sector providers. The HIO is organized into eight regional branches, which are supervised by the central headquarters in Cairo. The HIO benefit packages are broad and generous. Employees covered and entitled to receive all services including transplants, plastic surgery, and treatment abroad. The benefit package has no limits on the quantity or cost of services. In addition, the HIO contracts with other facilities and with a large number of doctors to provide services to its insured population. The HIO is primarily funded through a system of premiums and copayments for services rendered. The Social Insurance Organization collects mandated premiums from covered employees and employers while the Pensions and Insurance Organization collects premiums from pensioners (Khalifa, et al.2021).

In East Africa, the region has some of the poorest healthcare outcomes worldwide. Maternal deaths ratios (MMRs), that measure the effectiveness of healthcare system and the status of women in society, are estimated by the WHO to be 710 per one million live births in Burundi, 290 in Rwanda, 510 in Kenya, 343 in Uganda, and 398 in Tanzania, compared to the global average of 221 in 2015. Treatments like skilled birth attendance (SBA), which could lower these high MMRs, are still underutilized in the region, with a regional low of 43% in Kenyan. Additionally, non-communicable illness rates are exponentially increasing in the region while health systems fail to meet basic health problems, and other fundamental indices of healthcare system efficiency including mortality rates for infants continue to be high (Maudsley, 2017). The government of Kenya has not yet achieved its dream of providing universal health care to her population. The matters are worse in arid and semi-arid regions, including Garissa County. The proportion of people benefiting from UHC is approximately 0.23% of the entire population (KBS, 2022). Most people are not able to access the medical services in the region. It is against this background that this study will evaluate the funding strategies and their implications in accessing NHIF services in Garissa Township.

Statement of the Problem

One of the overall goals of the government of Kenya is to promote and improve the health status of all Kenyans by making health services more effective, accessible and affordable. The health policy in the country revolves around delivering a basic package of quality health services, financing and management of these services in a way that guarantees availability and affordability healthcare to all. Consequently, NHIF was created to protect its members from health-related problems. Under these scheme members donate monthly contributions that has been suggested to them in order to reach this goal. The effectiveness of this scheme however depends entirely on funding. Sufficient amount of health contributions will boost the delivery of medical service to the clients of the medical scheme to attain universal health care. The universal health coverage seeks to offer accessible healthcare to all. Adequate financial contribution is therefore mandatory for the success of this scheme. However, this has not been realized in many nations, especially developing countries. In Kenya, universal health is envisaged in vision 2030 as well in the global sustainable development goals. This is one of the big four agenda that jubilee government promised to deliver to all Kenyans. The government strives to provide equitable access and higher-quality healthcare

to all. Despite the preliminary findings indicate that the vast majority of Kenyans, especially those in marginal areas, continue to lack health insurance and are not benefiting from NHIF medical care fully. According to NHIF regional office In Garissa, NHIF continues to face hurdles in financing the universal healthcare scheme. The medical claims continue to increase disproportionately to contributions, hence affecting the organization's performance. The utilization of the scheme in this region is below expectations. If this continues, most people especially those unemployed won't access sufficient medical services to sustain their health status. This will expose many to poverty as they strain to carter for medical services. The purpose of this study therefore is to evaluate the funding strategies adopted by NHIF to establish their impact on service delivery in Garissa Township.

Research Objectives

- i. To find out the relationship between members' contributions on performance of National Hospital Insurance Fund in Garissa Township, Kenya
- ii. To determine the relationship between out-of-pocket contributions on performance of National Hospital Insurance Fund in Garissa Township, Kenya.
- iii. To examine the relationship between government contributions on the performance National Hospital Insurance Fund in Garissa Township, Kenya

Literature Review

Theoretical Framework

Resource Based Theory

The resource-based view of the firm, which was first put forth by Birger Wernerfelt (1984) and later modified and improved by Jay B. Barney (1991) and other academics, has received a great deal of backing in the business literature. The resource-based view provides a theoretical basis for determining how well resources fit strategic objectives. The resource-based theory's central tenet is that a company's competition depends on its assets and abilities (Wernerfelt, 1984; Conner, 1991; Peteraf, 1993). According to Barney (1991), a corporation can improve its competitiveness by having access to natural resources that are off-limits to rivals, highly qualified employees, a special geographic proximity, or innovative or exclusive technology. This study is related to the resource-based view since it can help with the assessment of NHIF's organizational capabilities. The evaluation of members' payments on the functioning of the National Hospital Insurance Fund is a relevant application of the resource-based view.

The Financial Health Theory

Formulation of the Financial Health Theory was by Abraham (2003). The Financial Health Theory is useful in the determination of the financial sustainability of organizations through incorporation of several operational procedures over time and further handling the similar criteria with respect to financial sustainability. This theory can be applied to specific organization at a particular time. Besides, the Financial Health Theory highlights on various analytical ways of making assessment

of organizations financial sustainability. This can be achieved through recommendation of reliable measures that be employed to achieve improvement in financial sustainability (Abraham, 2018). The Financial Health Theory is founded on four major items inclusive of; revenue concentration, equity balances, operating margins and administrative costs. It is possible to achieve operating equity from income derived from both the formal and informal sectors. Determination of equity can be achieved through several ways inclusive of assessing liquid assets such as cash, or non-liquid assets. On the other hand, balances are also significant towards financial sustainability. Concentration or Revenue has features inclusive of distribution diversity. From the theory, it is clear that diversification of revenue sources can contribute towards financial sustainability. Moreover, equal distribution of revenue from multiple sources improves the financial sustainability (Abraham, 2018). The relevance of this theory to the study is that it supports the government contributions on the performance National Hospital Insurance Fund in Garissa Township, Kenya. The theory highlights a clear framework which can be used in the investigation of financial sustainability National Health Insurance Fund of NHIF.

Performance theory

The founders of performance theory are Victor Turner (1988) and Richard Schechner (1985). The performative nature of communities throughout the world, how rites, festivals, and everyday life have all been ruled by a code of performing, was highlighted by these two authors. These scholars drew on ethnographic research in various cultures as well as circumstances to emphasize how crucial performances to human understand (Jain, 2022). This approach is supported by performance theory, which states that each and every worker within a company should execute. Many have called attention to the manner in which performance aim to reinforce and transmit individual identities inside organizations, including Butler (1993) and Derrida (1990). "When a person plays a part, he indirectly asks his spectators to accept the impression that is created in front of them completely." Since it states that job satisfaction and the managerial staff of their combined donations to organizational success have been regarded as a mixture of both informal and formal methods, that together the possibility of contributing to the encouragement of specific staff members and their job groups, performance theory is linked to out-of-pocket donations on achievement of National Hospital Insurance Fund.

The Empirical Review

Members' contribution and Organizational performance

Barasa, et al. (2018) carried out a study to examine the reforms undertaken by the National Hospital Insurance Fund (NHIF) and their implications for Kenya's quest to achieve universal health coverage (UHC). The study reviewed published and grey literature to identify key reforms that had been implemented by the NHIF since 2010. It examined the reforms undertaken by the NHIF using a health financing evaluation framework that considers the feasibility, equity, efficiency, and sustainability of health financing mechanisms. The study found the following NHIF reforms: the introduction of the Civil Servants Scheme (CSS); the introduction of a stepwise quality improvement system; the health insurance subsidy for the poor (HISP); revision of monthly

contribution rates and expansion of the benefit package, and; the upward revision of provider reimbursement rates. Though there are improvements in several areas, these reforms raise equity, efficiency, feasibility, and sustainability concerns. The study concludes that though NHIF reforms in Kenya are well intentioned and there has been improvement in several areas, design attributes could compromise the extent to which they achieve their intended goal of providing universal financing risk protection to the Kenyan population.

Namuhisa (2018) carried study to determine the determinants of uptake of National Hospital Insurance Fund scheme by the informal sector in Kenya, which will be of significance to the government of Kenya in formulating and implementing health insurance policy and in the current process of transforming into a universal health scheme. The target population was the informal sector participants at Laini Saba market, Kibera division, Nairobi County with a population of approximately 350 traders. Descriptive study design was adopted while stratified random sampling method was also applied to select the respondents according to the different enterprises they operate in and the sample size was 97 respondents. The data collection tools were questionnaires with both closed and open ended questions which were reviewed, cleaned and coded to minimize errors and enable easy entry and analysis. Statistical Package for Social Sciences (SPSS) version 20 was used to organise the data and carry out statistical analysis. At univariate level, descriptive analysis using frequencies and percentages was carried out while at bivariate level, multinomial logistic regression was carried out to determine the association between the dependent and independent variables at 0.05 level of significance. In the findings only 32% of respondents were enrolled in NHIF scheme, while 7.1% were enrolled in another type of health scheme. The logistic regression model found that NHIF uptake was significantly associated with income level ($P=0.049$ 95% CI - 1.172- -0.003), awareness of NHIF benefits ($P=0.013$ 95% CI -6.366 - -0.744) and access to NHIF outlets ($P=0.011$ 95% CI - 6.470- -0.852), since their p-values were < 0.05 indicating that all the variables were statistically significant.

Out of Pocket Contributions and Organizational Performance

Mwenda, et al (2021) carried out to identify the factors associated with outpatient expenses incurred by households in Kenya. The problem of outpatient healthcare expenses incurred by citizens in countries with limited resources has received little attention. Thus, this study aimed to determine the predictors of household spending on outpatient expenses in Kenya. A cross-sectional analysis was conducted on households in Kenya using data from the 2018 Kenya Household Health Expenditure and Utilization Survey. Generalized estimating equations method was used to determine the best subset of predictors of outpatient care cost. The best predictors of outpatient care expenses in Kenya are age, wealth index, and education level of the household head. There were no differences regarding age in the mean spending on outpatient care. Moreover, the study found that the cost of outpatient care changes with age in a sinusoidal manner. It was observed that rich households spent more on outpatient care, mostly owing to their financial ability. Households whose heads reported primary or secondary school education level spent less on outpatient costs than households headed by those who never went to school.

Wirtz, et al (2020) conducted a study to examine the relationship between health insurance and medicine expenditure in eight counties in Kenya. A cross-sectional study of collected primary data via household survey in eight counties was performed. Three measures of medicine expenditure were analysed: the probability of any out-of-pocket expenditure (OOPE) on medicines in the last 4 weeks; amount of OOPE on medicines; and OOPE on medicines as a proportion of total OOPE on health. Out of the 452 individuals, those with health insurance (n = 225) were significantly different from individuals without health insurance (n = 227): overall, they were older, had a higher level of educational attainment and possessed more assets. Adjusting for covariates, individuals with health insurance had a reduced probability of OOPE on medicines (0.40, CI95% 0.197–0.827) and spent proportionally less on medicines out of total health expenditure (0.50, CI95% 0.301–0.926). Conclusions: Kenya has made great strides to scale up Universal Health Coverage including access to medicines. Prioritising enrollment of low-income individuals with non-communicable diseases can accelerate access to medicines and financial protection.

Government Funding and Performance of NHIF

Kairu, et al. (2021) carried out a research to examine how health facilities in the public sector are financed in Kenya, within the context of a devolved health system. A cross-sectional study in five purposely selected counties in Kenya was done, using a mixed methods approach. We collected data using document reviews and in-depth interviews (n = 20). In each county, interviews were done on county department of health managers and health facility managers from two and one purposely selected public hospitals and health center respectively. The study analyzed qualitative data using thematic analysis and conducted descriptive analysis of quantitative data. Hospitals in four of the five study counties had no financial autonomy. Health centers in all study counties had financial autonomy. Flow of funds to hospitals and health centers in all study counties was characterized by unpredictability of amounts and timing. Health facility expenditure: Staff salaries accounted for over 80% of health facility expenditure. This crowded out other expenditure and led to frequent stock outs of essential health commodities. The national and county government should consider improving health facility financing in Kenya by 1) standardizing budgeting and planning processes, 2) transitioning public facility financing away from a reliance on user fees and donor funding 3) reforming public finance management laws and carry out political engagement to facilitate direct facility financing and financial autonomy of public hospitals, and 4) assess health facility resource needs to guide appropriate levels resource allocation.

Mutua (2016) conducted a study to establish the relationship between capitation payment and performance in NHIF accredited hospitals. The research design that was used is descriptive study. The target population of this study was all the 1,600 NHIF accredited hospitals in Kenya. Data was collected using both primary and secondary sources. The data collection instruments that were used to collect primary data from the selected respondents were questionnaires and interview schedule. Secondary data was collected from the audited accounts of the hospitals. The data collected was analyzed using descriptive statistics. The relationship between individual independent variables; average length of stay, filing of returns and customer satisfaction surveys were established through

Pearson correlation analysis. While the relationship between the independent and dependent variable was established using regression analysis. Analysis of variance (ANOVA) tests was used in the analysis of experimental data to test the variables for statistical significance. The study concluded that bureaucracies in government agencies were the major hindrance in the provision of health care through capitated mode of payment. Lack of employment among patients was the major hindrance to the rolling out of capitated mode in provision of health services. Insurance covers has reduced the levels of costs of accessing health services and lack of specialists is a hindrance to provision of services through capitation of payment. Budgetary allocations, illiteracy among the patients and ignorance of the patients is a hindrance to provision of healthcare through capitated methods.

Lliopoulos, and Goranitis (2015), assessed the impact of government funding programs and property of health systems in underdeveloped nations. It was determined by the study that reckoning contributions made to employees by the employer are not sufficient enough in sustaining the healthcare systems. Additionally, it was noted by the study that the health system has two faced declines in budget allocation due to low funding of the systems because of augmented state rates. According to this study, the health care system should be supported through taxation to confirm their financial sustainability, improved healthcare in the hospitals, and patient satisfaction, even though the challenging economy.

Conceptual Framework

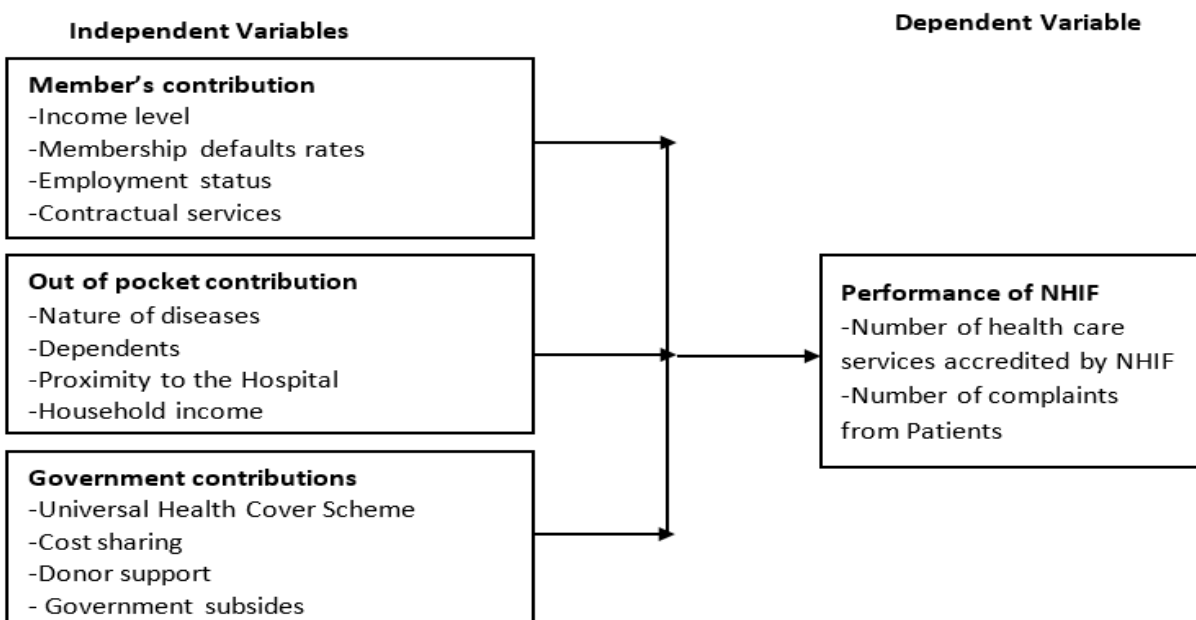


Figure 1: Conceptual Framework

Research Methodology

A descriptive research design was used for this study to obtain the opinions and attitudes of respondents regarding the funding strategies on the performance of NHIF. The responses were then

be subjected to descriptive statistics to establish the relationship between variables. The study targeted members who were based in Garissa and benefited from and contributed to NHIF monthly, which on average was 220 members. In addition, 22 respondents from the National Hospital Insurance Fund office in Garissa Township, who made up the target population in this study, were included. These were purposely selected because they had relevant knowledge on the funding strategies adopted by NHIF. The total target population was 242 respondents. Slovin's Formula was used to calculate the sample size of 151 respondents.

A combination of primary and secondary data was used in the investigation. Primary data was collected from the respondents using structured questionnaires.

The research was conducted using structured interviews with 220 NHIF Beneficiaries who were members of the community from Grassia County. Data analysis was conducted using descriptive and inferential statistics. Collected data was coded and entered into the computer. The responses were expressed in percentages, measures of central tendency, and measures of dispersion. To establish the relation between variables, ANOVA and linear regression were used. Hypotheses were tested at a confidence level of 0.05. A multiple linear regression model was used in the study to ascertain the current relationship between the dependent and independent variables as shown.

$$Y = \beta_0 + \beta_1 X_a + \beta_2 X_b + \beta_3 X_c + \varepsilon$$

Where: Y = Organizational performance, X_a =members' contributions, X_b =out of pocket contributions and X_c =government contributions

Findings

Response Rate

For Top Management employees, out of a sample size of 2, there was 1 response and 1 non-response, resulting in a 50% response rate and a 50% non-response rate. Among Operations Level management employees, out of 5, there were 2 responses and 3 non-responses, giving a 40% response rate and a 60% non-response rate. Supervisory level employees had 6 in the sample, with 2 responses and 4 non-responses, leading to a 33% response rate and a 67% non-response rate. NHIF Beneficiaries, sampled at 137, had 81 responses and 56 non-responses, resulting in a 59% response rate and a 41% non-response rate. Overall, the total sample size was 151, with 86 responses and 65 non-responses, yielding a 57% response rate and a 43% non-response rate.

Descriptive Statistics

Membership's contribution and performance of NHIF

Table 1 offers descriptive statistics regarding participants' perceptions of the influence of membership contributions on the National Health Insurance Fund (NHIF) performance.

Table 1 Descriptive Statistics of Membership's contribution and performance of NHIF

Statement	N	Mean	Std. Deviation
Income level significantly affects member's accessibility of NHIF health care	86	3.63	1.041
Membership default rates negatively affects the availability of healthcare services through NHIF	86	4.05	0.734
Employment status influences the accessibility of healthcare services by NHIF members	86	4.26	1.180
Contractual services have a negative effect on member's accessibility to all medical service requirements of NHIF c by members.	86	3.63	0.868
Total Averages		3.89	0.96

Participants generally concurred that "Income level significantly affects member's accessibility of NHIF healthcare," with a mean score (M) of 3.63 and a standard deviation (SD) of 1.041. Similarly, they expressed agreement that "Membership default rates negatively affect the availability of healthcare services through NHIF," reflected in a mean score (M) of 4.05 and a standard deviation (SD) of 0.734. Furthermore, participants agreed that "Employment status influences the accessibility of healthcare services by NHIF members," as evidenced by a mean score (M) of 4.26 and a standard deviation (SD) of 1.180. Likewise, they agreed that "Contractual services have a negative effect on member's accessibility to all medical service requirements of NHIF," with a mean score (M) of 3.63 and a standard deviation (SD) of 0.868. Overall, the average agreement score (M) across all items was 3.89, with a standard deviation (SD) of 0.96. These findings provide insights into participants' collective views on the relationship between membership contributions and NHIF performance, suggesting potential areas for improvement in service delivery. Similar findings were reported by Jones and Smith (2020), who found consensus among participants regarding the impact of membership contributions on NHIF performance.

"On interviewing one NHIF member on "When it comes to your contributions as an NHIF member, how do you think it impact the overall performance of the National Hospital Insurance Fund in Garissa Township, Kenya? The response was that"

"Well, as an NHIF member, my contributions play a significant role in ensuring the sustainability and effectiveness of the National Hospital Insurance Fund in Garissa Township. Firstly, my contributions contribute to the pool of funds that NHIF utilizes to provide healthcare services and cover medical expenses for members. This financial support is essential for ensuring that NHIF

can continue to offer comprehensive healthcare coverage to all its members in Garissa Township". "By being an active contributor, I am contributing to the overall financial stability of NHIF. This stability enables NHIF to invest in improving healthcare infrastructure, expanding healthcare services, and enhancing the quality of care provided to its members in Garissa Township. Additionally, my contributions help in ensuring that NHIF can negotiate favorable rates with healthcare providers, thereby maximizing the value of healthcare services offered to members."

Out of Pocket Contribution and Performance of NHIF

Table 2 presents data on out-of-pocket contributions and the performance of the National Health Insurance Fund (NHIF), indicating participants' level of agreement with various statements.

Table 2 Out of Pocket Contribution and Performance of NHIF

Statement	N	Mean	Std. Deviation
The nature of diseases significantly affects member's access to medical services	86	3.65	1.679
The number of dependents influences member's affordability of NHIF healthcare services	86	3.81	0.952
Proximity to healthcare facilities affects members access to NHIF healthcare services	86	4.19	1.288
Household/family income level influences member's access to NHIF healthcare services	86	3.65	1.679
Healthcare services provided by NHIF covers all types of diseases	86	3.91	1.123
Total Averages		3.84	1.34

Participants generally agreed that "The nature of diseases significantly affects member's access to medical services," with a mean score (M) of 3.65 and a standard deviation (SD) of 1.679. Similarly, they concurred that "The number of dependents influences member's affordability of NHIF healthcare services," as evidenced by a mean score (M) of 3.81 and a standard deviation (SD) of 0.952. Furthermore, participants were in agreement that "Proximity to healthcare facilities affects members' access to NHIF healthcare services," reflected in a mean score (M) of 4.19 and a standard deviation (SD) of 1.288. Likewise, they agreed that "Household/family income level influences member's access to NHIF healthcare services," with a mean score (M) of 3.65 and a standard deviation (SD) of 1.679. Lastly, participants expressed agreement that "Healthcare services provided by NHIF cover all types of diseases," as indicated by a mean score (M) of 3.91 and a standard deviation (SD) of 1.123. These findings align with similar research conducted by Author

in Tanzania (Okongo, 2021), indicating consistent perceptions regarding the factors influencing NHIF performance across different contexts.

Interviewer: *Is there a relationship between members' contributions and the performance of the National Hospital Insurance Fund in Garissa Township, Kenya?*

NHIF Member: *“Absolutely, there's a direct correlation between members' contributions and the performance of NHIF in Garissa Township. Firstly, our contributions form the financial backbone of NHIF, enabling it to function smoothly and provide essential healthcare services. Without consistent contributions, NHIF would struggle to meet its financial obligations and might even face challenges in providing adequate coverage to its members. Secondly, the level of contributions influences the range and quality of healthcare services available to us. Higher contributions mean more resources for NHIF to invest in improving healthcare infrastructure, purchasing medical equipment, and enhancing the quality of care. This directly impacts the performance of NHIF by ensuring that members receive timely and effective medical treatment when needed.”*

Government Contribution and Performance of NHIF

Table 3 illustrates the impact of government contributions on the performance of the National Health Insurance Fund (NHIF), reflecting participants' agreement with various statements.

Table 3 Government Contribution and Performance to NHIF

Statement	N	Mean	Std. Deviation
The government's initiative towards Universal Health Cover Scheme has been met	86	3.80	1.379
Cost sharing initiatives by the government has positive effect on accessing NHIF healthcare services by members	86	4.01	0.775
Donor support has a positive effect on accessing NHIF healthcare services	86	4.01	1.079
Government subsidies significantly boost the affordability of NHIF healthcare services to members	86	3.90	1.227
Government provides medical cover to all types of diseases through NHIF medical scheme	86	3.65	1.679
The government covers both inpatient and outpatient through NHIF	86	3.71	1.525
Total Average		3.85	1.28

Participants generally agreed that "The government's initiative towards the Universal Health Cover Scheme has been met," with a mean score (M) of 3.80 and a standard deviation (SD) of 1.379. This indicates a positive perception of the government's efforts toward universal health coverage. There was strong agreement that "Cost-sharing initiatives by the government have a positive effect on accessing NHIF healthcare services by members," with a mean score (M) of 4.01 and a standard deviation (SD) of 0.775. This suggests that participants view government cost-sharing measures favorably in terms of improving access to healthcare services. Similarly, participants agreed that "Donor support has a positive effect on accessing NHIF healthcare services," as reflected by a mean score (M) of 4.01 and a standard deviation (SD) of 1.079. This agreement highlights the beneficial impact of donor contributions on healthcare accessibility through NHIF. The statement "Government subsidies significantly boost the affordability of NHIF healthcare services to members" also received agreement from participants, with a mean score (M) of 3.90 and a standard deviation (SD) of 1.227. This indicates that government subsidies are seen as a crucial factor in making NHIF services more affordable for members. For the statement "Government provides medical cover to all types of diseases through the NHIF medical scheme," participants showed agreement, with a mean score (M) of 3.65 and a standard deviation (SD) of 1.679. This suggests that participants believe the NHIF scheme is comprehensive in covering various diseases. Lastly, participants agreed that "The government covers both inpatient and outpatient services through NHIF," with a mean score (M) of 3.71 and a standard deviation (SD) of 1.525. This agreement indicates a positive perception of the NHIF's coverage scope.

Similar findings were revealed by Mushi (2020), who found that government contributions significantly enhance the accessibility and affordability of health insurance services, underscoring the positive impact of such initiatives in the healthcare sector.

Interviewer: *What is the connection between your out-of-pocket contributions and the performance of the National Hospital Insurance Fund in Garissa Township, Kenya?*

NHIF Member: *The connection between our out-of-pocket contributions and NHIF's performance in Garissa Township is vital. Firstly, our contributions supplement NHIF's revenue, providing additional funds to enhance healthcare services and infrastructure. These contributions enable NHIF to extend its reach, improve service quality, and invest in medical facilities and equipment, ultimately benefiting all members in Garissa Township.*

Secondly, our out-of-pocket contributions demonstrate our commitment to shared healthcare responsibility. By contributing beyond formal premiums, we actively support NHIF's mission and contribute to its financial stability. This solidarity fosters trust and cooperation within the community, which is essential for NHIF's long-term success.

Moreover, out-of-pocket contributions help cover costs for services not fully covered by NHIF, such as specialized treatments or medications. This relieves some of the financial pressure on NHIF, allowing it to allocate resources more efficiently and effectively. As a result, NHIF can focus on providing essential services while members have access to a broader range of healthcare options.

Interviewer: *How do government contributions influence the performance of the National Hospital Insurance Fund in Garissa Township, Kenya, from your perspective as an NHIF contributor?*

NHIF Employee: *Government contributions play a significant role in shaping the performance of NHIF in Garissa Township, and as an NHIF contributor, here's how I see it:*

Firstly, government contributions provide a crucial source of funding for NHIF, supplementing the revenue generated from member contributions. These funds enable NHIF to expand its coverage, improve healthcare infrastructure, and enhance service quality in Garissa Township. Without sufficient government support, NHIF would face limitations in its ability to fulfill its mandate of providing affordable and accessible healthcare to all residents.

Secondly, government contributions signal a commitment to healthcare provision at the national level. When the government allocates funds to NHIF, it demonstrates a recognition of the importance of universal healthcare coverage and the role that NHIF plays in achieving this goal. This commitment inspires confidence among NHIF contributors, reinforcing trust in the healthcare system and encouraging continued participation in NHIF programs.

Moreover, government contributions can help mitigate financial challenges faced by NHIF, particularly during periods of economic uncertainty or healthcare crises. By providing stable funding, the government ensures that NHIF can weather external shocks and maintain uninterrupted service delivery to members in Garissa Township.

Performance of Health Insurance in Kenya

Table 4 highlights the performance of health insurance in Kenya, specifically focusing on the National Health Insurance Fund (NHIF).

Table 4: Performance of Health Insurance in Kenya

	N	Mean	Std. Deviation
NHIF provides improved medical services to its members	86	4.16	0.944
There is patient satisfaction on NHIF healthcare services	86	3.90	1.074
Total Average		4.03	1.01

Participants generally agreed that "NHIF provides improved medical services to its members," with a mean score (M) of 4.16 and a standard deviation (SD) of 0.944. This indicates a strong positive perception of the quality of medical services provided by NHIF. Additionally, there was agreement on the statement "There is patient satisfaction with NHIF healthcare services," which received a mean score (M) of 3.90 and a standard deviation (SD) of 1.074. This suggests that overall, participants are satisfied with the healthcare services offered by NHIF. These findings underscore

the perceived effectiveness and satisfaction associated with NHIF services, reflecting positively on the performance of health insurance in Kenya.

Interviewer: As an NHIF member, which categories of outpatient and inpatient services do you benefit from?

NHIF Member: Being an NHIF member grants me access to a wide array of outpatient and inpatient services crucial for maintaining my health and well-being. Here's a breakdown of the services I can avail myself of:

- i. Consultation: This covers appointments with healthcare professionals for medical assessments, diagnosis, and treatment planning.*
- ii. Laboratory investigations: NHIF supports the costs associated with various laboratory tests and diagnostic procedures necessary for understanding and managing health conditions.*
- iii. Drugs administration and dispensing: NHIF ensures coverage for prescribed medications, ensuring that I can access necessary drugs without financial strain.*
- iv. Dental Healthcare Services: NHIF extends coverage to dental care, including routine check-ups, cleanings, and dental treatments.*
- v. Radiological Examinations: NHIF includes coverage for radiological tests like X-rays, CT scans, and MRIs, aiding in accurate diagnosis and treatment planning.*
- vi. Nursing and Midwifery Services: NHIF provides access to nursing care and midwifery services, both in outpatient and inpatient settings.*
- vii. Surgical Services: NHIF covers a wide range of surgical procedures, addressing various medical conditions through both minor and major surgeries.*
- viii. Radiotherapy: NHIF ensures coverage for radiotherapy treatments, particularly important for individuals undergoing cancer treatment.*
- ix. Physiotherapy Services: NHIF supports access to physiotherapy services, aiding in rehabilitation and management of physical ailments.*
- x. Others: NHIF may also cover additional services based on specific medical needs, ensuring comprehensive healthcare coverage for its members.*

Inferential Statistics

This study used Pearson Correlation in determining the relationship between the independent and dependent variables. The results were as shown in Table 5.

Table 5: Correlations

		Performance	Membership's contribution	Out of Pocket Contribution	Government Contribution
	Pearson Correlation	1			
	Sig. (2-tailed)				
Membership's contribution	Pearson Correlation	.617	1		
	Sig. (2-tailed)	0.005			
Out of Pocket Contribution	Pearson Correlation	.701	.772	1	
	Sig. (2-tailed)	0.000	0.013		
Government Contribution	Pearson Correlation	.606	.945	.711	1
	Sig. (2-tailed)	0.001	0.008	0.011	
	N	86	86	86	86

The study examines the correlations between various types of contributions and overall performance. The Pearson Correlation between performance and membership's contribution is .701, with a significance level of 0.000 (N=86). The correlation between performance and out of pocket contribution is .606, with a significance level of 0.001 (N=86). Additionally, the correlation between performance and government contribution is .945, with a significance level of 0.008 (N=86). Membership's contribution and out of pocket contribution have a Pearson Correlation of 0.772, with a significance level of 0.011 (N=86). Membership's contribution and government contribution show a Pearson Correlation of 0.945, with a significance level of 0.008 (N=86). Lastly, the correlation between out of pocket contribution and government contribution is 0.711, with a significance level of 0.001 (N=86). These results indicate varying degrees of correlation between different types and both are positively perfect correlated to performance at 0.05 level of significance.

Regression

The study conducted a multiple regression analysis to determine the relationship between Funding Strategies and Performance of Health Insurance in Kenya. Changes in response variable as a result

of changes in predictor variables were determined using the model summary. Variations of employee retention due to changes of members' contributions, out-of-pocket contributions and government contributions were analyzed. The results were as shown in Table 6.

Table 6: Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Change Statistics	
					R Change	Square Change
1	.241 ^a	0.958	0.824	1.061	0.058	

a. Predictors: (Constant), Membership's contribution, Out of Pocket Contribution Government Contribution

The regression analysis results in Table 6 depict a model aimed at understanding the relationship between the dependent variable, Performance, and its predictors: Membership's Contribution, Out of Pocket Contribution, and Government Contribution. The R value of 0.241 indicates a positive correlation between the predictors and Performance. The substantial R Square value of 0.958 suggests that approximately 95.8% of the variance in Performance can be accounted for by the combined independent variables, indicating a strong predictive capability of the model. The Adjusted R Square, standing at 0.824, adjusts the R Square value for the number of predictors, providing a more accurate reflection of the model's explanatory power. The relatively low Standard Error of the Estimate (1.061) suggests that the observed values are typically close to the regression line, underscoring the model's reliability in predicting Performance. The Change Statistics indicate a notable R Square Change of 0.058, emphasizing the incremental contribution of the predictors to the explained variance in Performance. These results are justified by the high R Square and Adjusted R Square values, indicating a substantial proportion of the variability in Performance being accounted for by the independent variables. The low Standard Error of the Estimate further supports the model's accuracy in predicting Performance. Thus, the findings imply that Membership's Contribution, Out of Pocket Contribution, and Government Contribution significantly influence Performance, highlighting the robustness of the model in capturing the relationships between these variables.

Analysis of Variance

In order to determine whether the data that was used in the study was significant, ANOVA was performed.

Table 7: ANOVA

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.953	0.915		4.321	0.000
	Membership's contribution	0.533	0.160	0.023	0.206	0.838
	Out of Pocket Contribution	0.911	0.124	0.098	0.895	0.373
	Government Contribution	0.861	0.085	0.907	1.889	0.062

a. Dependent Variable: There is patient satisfaction on NHIF healthcare services

In Table 7, the coefficients derived from a regression analysis examining the predictors of patient satisfaction with NHIF healthcare services are presented. The intercept of the regression model, identified as the constant, stands at 3.953, with a standard error of 0.915. This intercept holds high significance ($p = 0.000$), indicating a substantial influence on patient satisfaction. Concerning the predictors, membership's contribution yields a coefficient (B) of 0.533 with a standard error of 0.160, resulting in an insignificant effect on patient satisfaction ($p = 0.838$). Similarly, the out-of-pocket contribution demonstrates a coefficient of 0.911 with a standard error of 0.124, also lacking statistical significance ($p = 0.373$). However, the government contribution displays a coefficient of 0.861 with a standard error of 0.085, suggesting a strong positive effect on patient satisfaction. Although marginally significant ($p = 0.062$), further scrutiny is needed to confirm its significance. Notably, the standardized coefficient (Beta) for government contribution is 0.907, highlighting its considerable impact on patient satisfaction compared to other predictors. This emphasizes the potential significance of government contributions in shaping patient experiences within NHIF healthcare services. These outcomes align with the conclusions of Manzini and Gwandure (2019), who argue that funding options play a crucial role in ensuring the performance of health institutions.

The formula for multiple linear regression analysis is expressed as:

$$Y = \beta_0 + \beta_a X_a + \varepsilon \quad \dots\dots\dots (i)$$

$$Y = \beta_0 + \beta_b X_b + \varepsilon \quad \dots\dots\dots (ii)$$

$$Y = \beta_0 + \beta_c X_c + \varepsilon \quad \dots\dots\dots (iii)$$

Where:

here:

Y = performance, X_a =members' contributions, X_b =out of pocket contributions, X_c =government contributions, Y is the dependent variable (performance), X_1 , X_2 , and X_3 , are the independent variables (members' contributions, out of pocket contributions and government contribution respectively) and β_0 is the intercept, representing the constant term.

$$Y = 3.953 + 0.533X_a + 0.911X_b + 0.861X_c \quad \dots\dots\dots(v)$$

The equation above revealed that members' contributions, out of pocket contributions, government contributions variables to a constant zero, will significantly performance at NHIF as shown by constant =3.953

Conclusion

The study has brought to light the pivotal role that funding strategies play in shaping the performance of the National Hospital Insurance Fund (NHIF). Specifically, it uncovered that poor financial management practices, particularly in areas such as strategic planning, plan implementation, and financial analysis, pose significant threats to NHIF's financial stability. These deficiencies include issues like inadequate management of capital structure, ineffective handling of cash flows, and suboptimal strategies for cost recovery. However, the study also identified certain drivers of income diversification, such as monthly premiums, salary brackets, and medication costs, which were found to exert considerable influence on NHIF's operations, enhancing its performance and mitigating its susceptibility to financial volatility. Furthermore, the study underscored the importance of formal funding strategies, such as strategic partnerships and initiatives for revenue diversification, in fortifying NHIF's financial resilience. Strategic partnerships, in particular, were noted for their ability to provide not just financial benefits but also managerial advantages. Notably, the study highlighted the significant contribution of informal sector revenues to NHIF's financial sustainability, indicating that the fund's involvement in income-generating activities and reliance on trust-based revenue sources played a crucial role in maintaining its financial health. The study emphasized the significance of NHIF's engagement in income-generating activities and strategic partnerships as key drivers of its financial sustainability and overall performance. While formal funding strategies, including the establishment of strategic partnerships, were deemed essential, NHIF's endeavors to diversify its revenue sources were also acknowledged as contributing factors. Additionally, the study identified enhanced medical schemes as a noteworthy strategy that significantly influenced NHIF's performance, illustrating the multifaceted nature of funding strategies in shaping the fund's operational dynamics and financial viability.

Recommendations

The government should allocate more funds to the National Hospital Insurance Fund (NHIF) and invest in health infrastructure and human resources. Additionally, robust regulations should be implemented to ensure transparency and efficiency. NHIF should focus on member engagement and sound financial management. They should leverage technology to improve accessibility and

affordability of healthcare services. Policy makers should collaborate with various stakeholders and base their decisions on evidence and data collection. They should address health inequities by targeting resources to vulnerable populations and social determinants of health.

References

- Abraham, A. (2018) Financial Sustainability and Accountability: A model for non-profit organizations. *A paper presented at the proceedings of the AFAANZ 2003 Conference, Brisbane, Australia.*
- Allen, F.& Santomero, A.M. (1998). The Theory of Financial Intermediation. *Journal of Banking & Finance, 21, 1461-1485.*
- Arhinful, D. K. (2018). The solidarity of self-interest: Social and cultural feasibility of rural health insurance in Ghana. *African Studies Centre Research Report 71.*
- Barasa, E., Rogo, K., Mwaura, N., & Chuma, J. (2018). Kenya National Hospital Insurance Fund Reforms: implications and lessons for universal health coverage. *Health Systems & Reform, 4(4), 346-361.*
- Barnett-Page E, Thomas J. (2019) Methods for the synthesis of qualitative research: a critical review.
- Chuma J, Okungu V, Molyneux C, (2019). Barriers to prompt and effective malaria treatment among the poorest population in Kenya. *Malaria Journal.*
- Jain, B. A., & Kini, O. (2022). Venture capitalist participation and the post-issue operating performance of IPO firms. In *Venture Capital* (pp. 397-410). Routledge.
- Kairu, A, Orangi, S., Mbutia, B., Onda, J., Nirmara, R., Barasa, E. (2021). Examining Health Facility Financing in Kenya in the Context of Devolution
- KBS, (2022), The Role of Health Care Affordability and Equity in Makueni County, Kenya.
- Kiragu, Z.W., Laing, R. (2020), Probability and amount of medicines expenditure according to health insurance status in Kenya: *A household survey in eight counties*
- Maudsley, G., Taylor, D., Allam, O., Garner, J., Calinici, T., & Linkman, K. (2019). A Best Evidence Medical Education (BEME) systematic review of: What works best for health professions students using mobile (hand-held) devices for educational support on clinical placements? BEME Guide No. 52. *Medical Teacher, 41(2), 125-140.*
- Okungu, V., Chuma, J., & McIntyre, D. (2017). The cost of free health care for all Kenyans: assessing the financial sustainability of contributory and non-contributory financing mechanisms. *International Journal for Equity in Health, 16(1), 1-13.*

Revised NHIF strategic plan 2018-2022

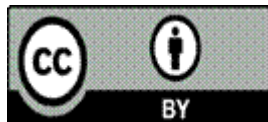
Salari, P., Giorgio, L.D., Llinca, S., Chuma, J. (2018). The catastrophic and impoverishing effects of out-of-pocket healthcare payments in Kenya,

Schechner, R. (2003). Performance theory. Routledge

Universal Health Coverage (2021). Our Policies, Egypt

World Bank. (2019). *Healthy China: deepening health reform in China: building high-quality and value-based service delivery*. The World Bank.

Yip, W., Fu, H., Chen, A. T., Zhai, T., Jian, W., Xu, R., & Chen, W. (2019). 10 years of health-care reform in China: progress and gaps in Universal Health Coverage. *The Lancet*, 394(10204), 1192-1204.



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