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Effect of Health Insurance Schemes on Financial Performance of Public Hospitals in Nakuru City in Kenya

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Abstract: *The means of financing health care has been identified as a barrier to access to health care and increases the likelihood of impoverishment of households. Moreover, health financing practices have a strong bearing on the financial performance of health facilities and conversely the effectiveness of service delivery. Therefore, this study sought to examine the effect of health insurance schemes on financial performance of public hospitals in Nakuru City Kenya. The study was anchored on systems theory. A descriptive research design was adopted in the study with a target population of all medical staff in health facilities in Nakuru city Kenya. Structured questionnaire constructed on a five point Likert scale was used for primary data collection. Collected data was coded and analyzed using statistical package for social sciences (SPSS) software. The findings from the analysis established that health insurance schemes have a positive and statistically significant relationship with the financial performance of public hospitals. Therefore the study concluded that health financing practices play a significant role in determining the financial performance of public hospitals. The study recommended that the government both the national and county government enhance the issuance of health insurance schemes to citizens to enhance the uptake of health services and conversely enhance the financial performance of public hospitals.*

Keywords: Health Insurance, Insurance Scheme, Financial Performance, Public Hospitals, Premiums

I. Introduction

According to the World Health Organization study (2021), health funding is a critical function of health systems that can help to achieve universal health coverage by boosting service coverage and financial security. Currently, millions of individuals are unable to use services owing to the high cost. Even when they pay out of pocket, many others receive terrible care. Health funding strategies that are carefully conceived and executed can assist to solve these difficulties. Although great progress has been made toward UHC globally, the World Bank cautioned in 2019 that if present trends continue, up to 5 million people may be unable to obtain health care by the end of this decade. According to the research, countries must boost expenditure on primary health care by at least 1% of their GDP in order to reach the health objectives set forth in the Sustainable Development Goals (World Bank Report, 2020).

The importance of health to human life and flourishing means that concerns about its allotment are important to us all. The means of financing health care has been identified as a barrier to access to health care and increases the likelihood of impoverishment of households (Munge, & Briggs, 2014). This is more so in developing countries such as Kenya where direct payments or out-of-pocket payments form a greater proportion of the sources of health-care financing. Fairness in financial contributions toward health care is a key component of modern-day approaches to health system assessment (Suchman, et al., 2018). Currently, health care in Kenya is financed from three main sources; out-of-pocket (OOP) expenditure (households), government expenditure, and donors. In 2005–06, OOP payments were 29.1% of total health expenditure. Out-of-pocket payments are a barrier to access to health care in Kenya (Kairu, et al., 2021).

Health financing is central to the functioning of health systems and the attainment of health-related sustainable development goals, including universal health coverage (UHC). The health financing arrangements of a country determine who gets access to what health services and the level of financial protection offered to the population (Asante, et al., 2020). Often the financing arrangements are influenced by the historical, social, political and economic development of the country (Asante, et al., 2019). In general, health financing covers three basic functions of revenue

collection, risk pooling and purchasing of health services. Revenue collection deals with rising of funds from different sources such as taxes, social security/insurance systems, fees, grants and loans to finance the health system (Asante, et al., 2019).

Kenya Vision 2030, the national strategic plan, states that 'Kenya's vision for health is to provide equitable and affordable health care'. The recently enacted Constitution of Kenya guarantees the right to the 'highest attainable standard of health which includes the right to health care service'. The Kenya Health Policy 2012–30 identified free access to specific forms of health care as one of its priority policy strategies. Although none of these policy documents explicitly states that healthcare payments should be matched with the ability to pay this may be implied by their commitment to equity in the distribution of health services and the reduction of the burden (Kabia, et al., 2019). A healthy population plays a critical role in boosting economic growth, poverty reduction, and the realization of social, economic, and political goals. Key areas of focus for Kenya's health sector, as laid out in the Kenya Vision 2030 document, are access, quality, capacity, and institutional development. Achieving these healthcare goals depends greatly on the financing mechanisms, having the necessary human resources for health and infrastructure to deliver the healthcare services (Okech & Lelegwe, 2016).

Public healthcare facilities financing can affect health system goals in several ways. For example, the reliability of sources of funds may influence the achievement of financial risk protection goals. Under-resourced healthcare facilities are likely to deliver poor-quality services and outcomes of care (Okech & Lelegwe, 2016). Resource allocation mechanisms for public healthcare facility resources may influence the efficiency and equity of their operations, as well as affect the quality of services provided. Payment mechanisms, the efficiency of their disbursements, and the autonomy healthcare facilities have over their finances may generate unintended incentives for healthcare providers as well as compromise the operational efficiencies of healthcare facilities (Kabia, et al., 2019).

Health Insurance Schemes are designed to help individuals mitigate the financial burden of unexpected medical bills and ensure access to necessary healthcare services. Health insurance schemes can be offered by both public and private entities and may vary widely in terms of coverage, cost-sharing arrangements, and eligibility criteria (Cao, Chen, & Yang, 2023). Out-Of-Pocket Payment expenses are paid directly by the patients at the point of care, and they can include deductibles, copayments, coinsurance, and any healthcare costs not covered by insurance (Kumbeni, Afaya, & Apanga, 2023).

Public-Private Partnership (PPP) is a collaborative arrangement between a government or public sector entity and a private sector organization or consortium. In a PPP, both parties work together to design, finance, implement, and often operate and maintain infrastructure projects or public services that traditionally fall within the purview of the public sector. PPPs are characterized by a sharing of risks, responsibilities, and resources between the public and private sectors, with the goal of achieving mutual benefits and improving the delivery of public services or infrastructure (Suchman, Hart, & Montagu, 2018). On the other hand Donor Funding Strategy in the health sector is a systematic plan or approach adopted by governments, international organizations, or philanthropic entities to mobilize and allocate financial resources to support health related programs, initiatives, or projects in a specific region or country. This strategy outlines the sources of funding, the allocation of funds to various health priorities, and the mechanism for monitoring and evaluating the impact of donor contributions on health outcomes (McDonough, & Rodríguez, 2020).

II. Statement of the Problem

Kenya lags in various global health sector targets one of them being the implementation of the 2001 Abuja declaration pledge that sought to ring-fence 15 percent of government budgets on public healthcare. According to Kenya health financing strategy 2020-2030, though financial resources available and spent for health have been on the increase in the past 15 years, they still fall short of the international benchmarks to deliver basic and essential package of health for the population. According to Kenya national health accounts 2018/2019, its estimated a per capita spending of US$ 76 which is lower than the minimum recommended by WHO of US$ 87 needed to deliver an essential package of health for Kenya. According to the County Government of Nakuru ADP (2021) the health sector, managed to collect Kshs 1,200,123,477.25 billion against target of Ksh 1,400,000,000.00 thus the department had a funds deficit of Ksh.199,876,522.8 under the Facility Improvement Fund. The major challenges noted in the post-devolution era within the health sector include inadequate resources/funds from the national government and understaffed health facilities (Masaba, et al., 2020). Thus the entire pool of monies available for health is inadequate to meet basic population needs irrespective of whether efficiencies are achieved. Various scholars have done studies in this area. Kairu, Orangi,

Mbuthia, Ondera, Ravishankar and Barasa (2021) examined health facility financing in Kenya in the context of devolution. Mugo (2023) examined the impact of health insurance enrollment on health outcomes in Kenya. Asante et al. (2020) examined health financing in Sub-Saharan Africa: from analytical frameworks to empirical evaluation. However, these studies were not specific on the interlink between health financing practices and financial performance and especially in Nakuru city. Consequently, this study sought to examine the effect of health care financing practices on financial performance in public hospitals in Nakuru City in Kenya.

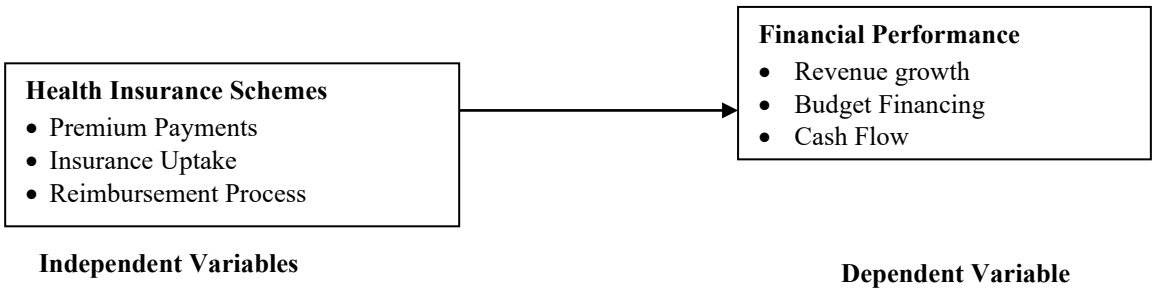
III. Purpose of the Study

The study sought to evaluate the effect of health insurance schemes on financial performance of public hospitals in Nakuru city in Kenya.

IV. Hypothesis of the Study

H_0: Health insurance schemes have no statistically significant effect on financial performance of public hospitals in Nakuru city in Kenya.

V. Conceptual Framework



VI. The Systems Theory

The systems theory was first fronted by Von Bertalanffy in 1956 and has since come to be dominant organizational theories in management. Ludwig defines a system as a set of objects or entities that interrelate with one another to form a whole. The System's theory is basically concerned with problems of relationships, of structures, and of interdependence, rather than with the constant attributes of objects. The systems theory views an organization as a social system consisting of individuals who cooperate within a formal framework, drawing resources, people, and finances from the services they offer. This theory is based on the view that managers should focus on the role played by each part of an organization; rather than dealing separately with the parts (Hannagan, 2002).

The system theory maintains that an organization (the Sub-County in the present case) does not exist in a vacuum. It does not only depend on its environment, but it is also part of a large system such as the society or the economic system to which it belongs. The approaches are concerned with both interpersonal and group behavioral aspects leading to a system of cooperation. Plomp and Pelgrum (1993) noted that a devolved public system is a complex system comprising of sub-systems at different levels; these are macro (national government), meso (County government) and micro (Sub-County staff and clients) levels. At each of these levels, the health care management decisions are influenced by different actors, for example, at the macro level; the national government and donors make certain decisions for public health care management systems operators and give opinions on their funding objectives and the expected outcomes from the resources. The systems theory emphasizes unity and integrity of the organization and focuses on the interaction between its component parts and the interactions with the environment. It suggests that organizations must be studied as a whole taking into consideration the interrelationships among its parts and its relationship with the external environment.

VII. Health Insurance Schemes and Financial Performance

According to Das and Do (2023), governments in many low- and middle-income countries are developing health insurance products as a complement to tax-funded, subsidized provision of health care through publicly operated facilities. They observe that health insurance may boost fiscal revenues for health care, as post treatment out of pocket payments to providers would be replaced by pre-treatment insurance premiums to health ministries. Moreover, increased patient choice and carefully designed physician reimbursements would increase quality in the health care sector. However, Das and Do (2023) indicated that though these are the objectives of these measures, the objectives have

only been partially met. Despite evidence that health insurance has provided financial protection; consumers are not willing to pay for unsubsidized premiums. Health outcomes have not improved despite an increase in utilization of health insurances. The authors note that this is not because there was no room to improve the quality of care but because behavioral responses among healthcare providers have systematically undermine the objectives of these insurance schemes.

In their study, Osei Afriyie, Masiye, Tediosi and Fink (2023) assessed purchasing for high quality care using national health insurance; evidence from Zambia. The study sought to examine the extent to which the purchasing arrangements established within Zambia's new national health insurance can improve equitable access to high quality care. The study reviewed policy documents and conducted 32 key-informant interviews with stakeholders at national, sub-national and health facility levels. The study established that the new health insurance could boost financial resources in higher levels of care, improve access to high-cost interventions, improve care experiences for its beneficiaries and integrate the public and private sectors. They also found that health insurance would likely improve some aspects of structural quality but may not be able to influence process and outcome measures of quality. These potential limitations are attributable to the existing governance and financial challenges, low investments in primary care and shortcomings in the design and implementation of the purchasing arrangements of health insurance.

Aryeetey, Nonvignon, Amissah, Buckle and Aikins (2016) examined the effect of the national health insurance scheme (NHIS) on health service delivery in mission facilities in Ghana; a retrospective study. The study conceptualized the effect of of NHIS on facilities using service delivery indicators such as outpatient and inpatient turn out, estimation of general service readiness, revenue and expenditure, claims processing and availability of essential medicines. Data was collected from 38 mission facilities using structured questionnaires and exit interviews. The study established that there was an increase in outpatient and inpatient attendance, revenue, expenditure and improved access to medicines. The facilities reported increased readiness to deliver services. However, challenging issues around high rates of non-reimbursement of NHIS claims due to errors in claims processing, lack of feedback regarding errors, and lack of clarity on claims reporting procedures were reported.

Suchman, Hashim, Adu and Mwachandi (2020) studied seeking care in the context of social health insurance (SHI) in Kenya and Ghana. The study drew from two datasets collected under the African Health Markets for Equity (AHME) program. One dataset, collected in 2013 and 2017 as part of the AHME qualitative evaluation, consisted of 106 semi-structured clinic exit interviews conducted with patients in Ghana and Kenya. This data was analyzed using an inductive, thematic approach. The second dataset was collected internally by the AHME partner organizations. It derived from a cross-sectional survey of social franchise clients at three social franchise networks supported by AHME. The established that many clients appreciated that insurance coverage made healthcare more affordable, reported seeking care more frequently when covered with SHI. They also established that coverage gave clients access to a wider variety of providers but rarely sought out SHI-accredited providers specifically. However, clients sometimes were charged for services that should have been covered by insurance. Due to a lack of understanding of SHI benefits, clients rarely knew they had been charged inappropriately.

Bartilol (2022) examined health insurance and demand for inpatient services in private hospitals in Kenya. Specifically, the study assessed the patterns of inpatient services between the insured and the uninsured in private hospitals in Kenya and to examine the effects of health insurance ownership on utilization of inpatient services in private hospitals in Kenya. Kenya household health expenditure and utilization survey (KHHEUS, 2018) dataset was utilized. The study established that the demand for admission in the private hospital was 39.3% of the inpatient admissions during the entire period preceding the survey. Among those who consumed inpatient health care services in public hospitals, only 35.7% were insured compared to 77.2% in private hospitals. The study concluded that medical insurance significantly influenced the choice of inpatient healthcare services use either public or private.

VIII. Financial Performance in Public Hospitals

There is a convergence in opinion that adequate public financing as a health intervention affects the quality and uptake of health services which ultimately insures citizens against catastrophic health expenditures (Verguet, Olson, Babigumira, Desalegn, Johansson, Kruk, Levin, Nugent, Pecenka, Shrime, Memirie, Watkins, & Jamison, 2015). Indeed, public health sector financing for many countries comes from tax revenues, donor funds, and out-of-pocket expenditure (Verguet et al., 2015). But despite such anticipation, many countries are yet to harness the above significance. Like in India, their health care system is punctuated by low levels and uneven spread of public spending on health care hence poor quality of health care services as the system over-depends on poor population's out of pocket funding (Govinda &

Mita, 2012). While in Brazil, Massuda, Hone, Leles, de Castro, and Atun (2018) established that structural problems persisted in terms of low public funding and suboptimal resource allocation which was consequently illuminating large regional disparities in access to healthcare services.

Kamau and Kimutai (2022) in their study sought to examine the healthcare schemes and financial performance of public hospitals in Nairobi City County in Kenya. The study specifically sought to establish the effect of Civil Servants scheme, Health Insurance Subsidy Program (HISP) scheme, Linda Mama scheme and National scheme on financial performance of public hospitals in Nairobi City County. A descriptive research design was adopted for the study with a target population of 80 public hospitals in Nairobi city County. A census approach was adopted in the data collection. Secondary data was collected using a secondary data collection sheet. The data collected covered two years between 2019 and 2020. The study established that civil servants schemes, HISP, Linda mama scheme and National scheme all had strong positive significant effect on the financial performance of public hospitals in Nairobi City County.

In their study, Moses et al. (2021) undertook a performance assessment of the county healthcare systems in Kenya: a mixed methods analysis. The study aimed to measure/compare the performance of Kenya's public healthcare system at the county level and explore remediable drivers of poor healthcare system performance. Using administrative data from fiscal year 2014/15 through fiscal year 2017/18, the study measured the technical efficiency of 47 county-level public healthcare systems in Kenya using stochastic frontier analysis. The study then regressed the technical efficiency measure against a set of explanatory variables to examine drivers of efficiency. Moreover, in selected counties, the study analyzed surveys and focus group discussions to qualitatively understand factors affecting performance. The study established that the median technical efficiency of county public health systems was 84%. Across the four fiscal years of data, 27 out of the 47 Kenyan counties had a declining technical efficiency score. Regression analysis indicated that impediments to the flow of funding—measured by the budget absorption rate which is the ratio between funds spent and funds released— were significantly related to poor healthcare system performance. Analysis of interviews and surveys yielded a similar conclusion as nearly 50% of respondents indicated issues stemming from poor budget absorption were significant drivers of poor healthcare system performance.

A study by Muturi and John (2020) assessed financial management practices and growth of public hospitals in Nyeri County in Kenya. The study sought to investigate how budgeting, internal control systems, financial tracking, and waiver affect financial management practices and growth in government hospitals. The study used a descriptive survey design. The study targeted 202 respondents who were the employees of the four county public hospitals under study. Stratified simple random sampling was used, and a sample of 101 respondents was selected. The study used both primary and secondary data sources for data collection. The findings indicated that there has been an increase in the number of operational cost in majority of the hospitals. Majority of the public hospitals experience a lot of challenges and delays before budget is approved. The findings indicated that there are several steps that should be followed before authorization of any payment in hospital. The results presented poor control of revenue in the hospital and lack of proper coordination and monitoring. The study findings indicate that financial tracking procedures are hard to follow and that the procedures are not very clear to all the employees. Nonetheless, audit practices were shown to have a strong positive relationship with growth of public hospitals while the relationship between financial tracking and growth of public hospitals is weak negative and significant.

In his study, Kamuti (2023) examined the determinants of revenue collection in public hospitals in Kenya. The study explored the intricate mechanics of revenue collection in Public hospitals in Nairobi and throughout Kenya. This study looks at how important management is to hospital operations, highlighting the need for strict oversight of processes to maximize revenue collection. In essence, this research underscores the pivotal roles of management, workforce quality, service delivery, and strategic revenue collection in bolstering revenue generation for Kenya's public hospitals. The study highlights the importance of revenue in determining government allocation for hospitals and how hospitals with higher revenue attract more capital expenditure due to their service quality. The revenue collected is used for hospital maintenance, running activities, and procuring necessary facilities.

IX. Research Methodology

9.1 Research Design

The researcher adopted a descriptive research design that is unrestricted which as defined by Cooper and Schindler (2014) is a time-based plan that guides selection of sources and types of information all based on the research questions.

The target population of this study consisted of administration and medical staff working in hospitals in Nakuru City in Kenya. There are fourteen (14) public health facilities in Nakuru city with a total of 591 (Nakuru County Ministry of Health 2023) administration and medical staff. Yamane (1967) formula was used to calculate a sample of 86 respondents.

9.2 Data Collection Instruments

The main data collection instrument which was used in this study was a questionnaire which contained both open ended and close ended questions with the quantitative section of the instrument utilizing a 5-point Likert-type scale format. In order to ensure that the research instruments are reliable, the instrument was taken for piloting with 10% (Hertzog, 2008) of the sample size in Naivasha Sub-County hospitals. This helped to ascertain whether the results of the pilot study correspond with the objectives of the study.

X. Findings and Analysis

10.1 Response Rate

The number of questionnaires that were administered to all the respondents was 86 questionnaires. A total of 71 questionnaires were properly filled and returned from the public hospital staffs. This represented an overall successful response rate of 88.75%. According to Mugenda and Mugenda (2003), a response rate of 50% or more is adequate.

10.2 Health Insurance Schemes

The study sought to examine the respondents' views in regard to health insurance schemes with respect to public hospitals in Nakuru city. The means and standard deviation values of the respondents' views were computed. The findings from the analysis were as presented in Table 1

Table 1: Descriptive Statistics on Health Insurance Schemes

	N	Min	Max	M	Std
Most of the patients prefer insurance premiums than the actual hospital fees	71	2	5	4.23	.513
Health insurance premiums help mitigate against the strains associated with hospital expenses	71	1	5	3.59	.935
Paying for insurance gives patients a choice among the variety of providers of health services	71	3	5	4.20	.435
A majority of our patients have health insurance	71	2	5	4.01	.765
Uptake of health insurance have helped majority of the people to seek medical services before disease progression	71	2	5	3.99	.707
Most of the patients in public hospitals have no health insurance	71	1	5	4.18	.899
Our hospital avoids some health insurances due to reimbursement challenges	71	2	5	4.27	.827
Our hospitals only prefers government health insurance schemes for the sake of reimbursement	71	2	5	4.32	.580
Health insurances have become a major source of health revenue due to timely reimbursements	71	2	5	4.27	.696
Valid N (listwise)	71				

The findings from Table 1 established that the respondents were in agreement with all the aspects of health insurance schemes. Respondents agreed (M=4.23, SD=.513) that most of the patients prefer insurance premiums than the actual hospital fees and that health insurance premiums help mitigate against the strains associated with hospital expenses (M=3.59, SD=.935). On the other hand, respondents agreed (M=4.20, SD=.435) that paying for insurance gives patients a choice among the variety of providers of health services and that a majority of their patients have insurance (M=4.01, SD=.765).

Further, the respondents agreed (M=3.99, SD=.707) that the uptake of health insurance have helped majority of the people to seek medical services before disease progression and that most of the patients in public hospitals have no health insurance (M=4.18, SD=.899). Additionally, respondents were in agreement (M=4.27, SD=.827) that their hospital avoids some health insurances due to reimbursement challenges and that their hospital only prefers government health insurance schemes for the sake of reimbursement (M=4.32, SD=.580). Conversely, the respondents agreed (M=4.27, SD=.696). The researcher further noted that the respondents demonstrated cohesion in their responses with all the items registering standard deviation values less than one.

10.2 Financial Performance

Finally, the study sought to examine the respondents views in regard to the financial performance of public hospitals in Nakuru city in Kenya. As such, the means and standard deviation values were established to help in making inferences in regard to financial performance. The findings from the analysis were as presented in Table 2

Table 2: Descriptive Statistics on Financial Performance

	N	Min	Max	M	Std
Our hospital is able to generate a lot of revenue from its services	71	2	5	4.15	.839
Enhanced revenue generation has enabled our hospital to enhance its services	71	2	5	4.20	.749
We always operate with a budget plan in all our operations	71	3	5	3.99	.493
We are able to fully finance our budget from revenue generated through our service offers	71	2	5	3.87	.877
The budget financing is supplemented by government allocation	71	1	5	3.75	.857
Our services efficiency enables the hospital to generate sufficient cash flows	71	1	5	4.15	1.104
Sufficient funding has enabled effective delivery of health care services to a larger population	71	3	5	4.41	.709
Valid N (listwise)	71				

Results in Table 2 demonstrated that the respondents were in agreement with all the items relating to financial performance. Respondents agreed (M=4.15, SD=.839) that their hospital is able to generate a lot of revenue from its services and that enhanced revenue generation has enabled their hospital to enhance its services (M=4.20, SD=.749). Further, respondents agreed (M=3.99, SD=.493) that they always operate with a budget plan in all their operations and that they are able to fully finance their budget from revenue generated through their service offers (M=3.87, SD=.877). Respondents also agreed (M=3.75, SD=.857) that the budget financing is supplemented by government allocation and that their services efficiency enables the hospital to generate sufficient cash flows (M=4.15, SD=1.104). Moreover, the respondents observed (M=4.41, SD=.709) that sufficient funding has enabled effective delivery of health care services to a larger population. Moreover, the respondents' views were very cohesive having standard deviation values less than one in all the items apart from one item.

10.3 Health Insurance Schemes and Financial Performance

The study undertook correlation analysis to assess the relationship between health insurance schemes and financial performance of public hospitals in Nakuru City Kenya. The findings from the analysis were as presented in Table 3

Table 3: Relationship between Health Insurance Schemes and Financial Performance

		Health Insurance Schemes
Financial Performance	Pearson Correlation	.634**
	Sig. (2-tailed)	.004
	N	71

**. Correlation is significant at the 0.01 level (2-tailed).

The results in Table 3 indicated the presence of an average, positive but significant (r=0.634, p=.004) relationship between health insurance schemes and financial performance. As such, health insurance schemes play a significant role in determining the financial performance of the public hospitals in Nakuru city. In concurrence with these findings, Osei et al. (2023) established that health insurance is able to boost financial resources in higher levels of care, improve access to high-cost interventions, improve care experiences for its beneficiaries and integrate the public and private sectors. Conversely, health insurance schemes are a significant determinant of the financial performance of public hospitals in Nakuru city in Kenya. Moreover, Suchman et al. (2020) observed that health insurance schemes have made healthcare more affordable and patients sought care more frequently when availed with health insurance.

XI. Conclusions and Recommendations

The study established that health insurance schemes were significant in determining financial performance. The respondent also affirmed the role of health insurance schemes on the financial performance of public hospitals. As such, the study concluded that health insurance schemes are significant in determining the financial performance in public hospitals in Nakuru City County in Kenya. Further, t The study noted that health insurance schemes significantly influence the financial performance in public hospitals. As such the study recommends that the country leadership should ensure they improve on health insurance schemes issuance to enhance the uptake of health services and thus

enhance the financial performance of public hospitals. This will be important to ensure that citizens are able to access health care services from the primary aspect and thus prevent escalation of diseases. Conversely, this will enable the improvement of the financial performance of public hospitals.

REFERENCES

[1] Aryeetey, G. C., Nonvignon, J., Amissah, C., Buckle, G., & Aikins, M. (2016). The effect of the National Health Insurance Scheme (NHIS) on health service delivery in mission facilities in Ghana: a retrospective study. *Globalization and health*, *12*, 1-9.

[2] Asante, A. D., Jacobs, B., & Wiseman, V. (2019). Transforming health systems financing in Lower Mekong: making sure the poor are not left behind. *Health policy and planning*, *34*(Supplement_1), i1-i3.

[3] Asante, A., Wasike, W. S., & Ataguba, J. E. (2020). Health financing in sub-Saharan Africa: from analytical frameworks to empirical evaluation. *Applied health economics and health policy*, *18*, 743-746.

[4] Bartilol, P. K. (2022). *Health Insurance and Demand for Inpatient Services in Private Hospitals in Kenya* (Doctoral dissertation, University of Nairobi).

[5] Cao, Y., Chen, H., & Yang, X. (2023). The impact of medical insurance on family financial support: evidence from CHARLS in China. *Health Economics Review*, *13*(1), 39.

[6] Cooper, D. R., & Schindler, P. S. (2014). *Business research methods (12th Ed.)*. New York, NY: McGraw-Hill Education.

[7] County Government of Nakuru. (2021). *Nakuru County annual development plan (ADP) 2021/2022*. County Government of Nakuru

[8] Das, J., & Do, Q. T. (2023). The Prices in the Crises: What We Are Learning from 20 Years of Health Insurance in Low-and Middle-Income Countries. *Journal of Economic Perspectives*, *37*(2), 123-152.

[9] Govinda, R. &Mita, C. (2012). Health Care Financing Reforms in India.National Institute of Public Finance and Policy Working Paper No: 2012-100. Pages: 1-35. Retrieved from: https://www.researchgate.net/profile/Govinda_Rao/publication/241763971_Health_Care_Financing_Reforms_in_India/li nks/004635289e5ad1df3c000000/Health-Care-Financing-Reforms-in-India.pdf

[10] Hannagan, T. (2002). *Management: Concepts and practices* (3rd ed.). Harlow, England: Financial Times/Prentice Hall.

[11] Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Research in Nursing & Health, 31*(2), 180–191. https://doi.org/10.1002/nur.20247

[12] Kabia, E., Mbau, R., Oyando, R., Oduor, C., Bigogo, G., Khagayi, S., & Barasa, E. (2019). "We are called the et cetera": experiences of the poor with health financing reforms that target them in Kenya. *International journal for equity in health*, *18*, 1-14.

[13] Kairu, A., Orangi, S., Mbuthia, B., Ondera, J., Ravishankar, N., & Barasa, E. (2021). Examining health facility financing in Kenya in the context of devolution. *BMC health services research*, *21*, 1-13.

[14] Kamau, E. N., & Kimutai, C. (2022). Healthcare Schemes and Financial Performance of Public Hospitals in Nairobi City County Kenya. *International Research Journal of Economics and Finance*, *4*(3). 345 – 359.

[15] Kamuti, A. K. U. (2023). Determinants of Revenue Collection in Public Hospitals in Kenya. *African Journal of Commercial Studies*, *3*(1), 27-33.

[16] Kenya. Kenya Household and Health Expenditure and Utilization Survey (KHHEUS) 2018.

[17] Kumbeni, M. T., Afaya, A., & Apanga, P. A. (2023). An assessment of out of pocket payments in public sector health facilities under the free maternal healthcare policy in Ghana. *Health Economics Review*, *13*(1), 8.

[18] Masaba, B. B., Mmusi-Phetoe, R. M., & Mokgatle, M. M. (2020). Addressing barriers to healthcare access for improved maternal and newborn health outcomes in the post-devolution health system in Kenya. *BMC Pregnancy and Childbirth, 20*(1), 1–9. https://doi.org/10.1186/s12884-020-03010-1

[19] Massuda A, Hone T, Leles F.A.G., de Castro, M.C., &Atun, R. (2018). The Brazilian health system at crossroads: progress, crisis and resilience. *Bio Medical Journal of Global Health; 3*(1), 1-8

[20] McDonough, A., & Rodríguez, D. C. (2020). How donors support civil society as government accountability advocates: a review of strategies and implications for transition of donor funding in global health. *Globalization and health*, *16*(1), 1-18.

[21] Moses, M. W., Korir, J., Zeng, W., Musiega, A., Oyasi, J., Lu, R., ... & Di Giorgio, L. (2021). Performance assessment of the county healthcare systems in Kenya: a mixed-methods analysis. *BMJ global health*, *6*(6), e004707.

[22] Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative & qualitative apporaches* (Vol. 2, No. 2). Nairobi: Acts press.

[23] Mugo, M. G. (2023). The impact of health insurance enrollment on health outcomes in Kenya. *Health Economics Review*, *13*(1), 42.

[24] Munge, K., & Briggs, A. H. (2014). The progressivity of health-care financing in Kenya. *Health policy and planning*, *29*(7), 912-920.

[25] Muturi, B. W., & John, M. (2020). *Financial management practices and growth of public hospitals in Nyeri County, Kenya* (Doctoral dissertation, KENYATTA UNIVERSITY).

[26] Nakuru County Ministry of Health. (2023). *Health sector annual report 2023*. Nakuru County Government.

[27] Okech, T. C., & Lelegwe, S. L. (2016). Analysis of universal health coverage and equity on health care in Kenya. *Global journal of health science*, *8*(7), 218.

[28] Osei Afriyie, D., Masiye, F., Tediosi, F., & Fink, G. (2023). Purchasing for high-quality care using National Health Insurance: evidence from Zambia. *Health policy and planning*, *38*(6), 681-688.

[29] Plomp, T., & Pelgrum, W. J. (1993). *Introduction to educational and training technology*. Oxford: Pergamon Press.

[30] Suchman, L., Hart, E., & Montagu, D. (2018). Public–private partnerships in practice: collaborating to improve health finance policy in Ghana and Kenya. *Health policy and planning*, *33*(7), 777-785.

[31] Suchman, L., Hashim, C. V., Adu, J., & Mwachandi, R. (2020). Seeking care in the context of social health insurance in Kenya and Ghana. *BMC public health*, *20*(1), 1-13.

[32] Verguet, S., Olson, Z.D., Babigumira, J.B., Desalegn, D., Johansson, K.A., Kruk, M.E., Levin, C.E., Nugent, R.A., Pecenka, C., Shrime, M.G., Memirie, S.T., Watkins, D.A., & Jamison, D.T. (2015).Health gains and financial risk protection afforded by public financing of selected interventions in Ethiopia: an extended cost-effectiveness analysis. Lancet Global Health, Vol.3: e288–e296.

[33] Von Bertalanffy, L. (1956). General System Theory, in Emery, F.E. (eds.). *General System*, Yearbook of the Society for the Advancement of General System Theory.

[34] World Bank. (2020). *Tracking universal health coverage: 2020 global monitoring report*. World Bank & World Health Organization. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/985311603547921815/tracking-universal-health-coverage-2020-global-monitoring-report

[35] World Health Organization. (2021). *Global spending on health: Weathering the storm*. World Health Organization. https://www.who.int/publications/i/item/9789240017788

[36] Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). New York, NY: Harper & Row