

# FINANCING HEALTH CARE IN KENYA: ARE KENYANS WILLING TO PAY HIGHER TAXES FOR BETTER HEALTH CARE?

Billystrom Jivetti<sup>\*1</sup>, Adélar N. Alcántara<sup>1</sup>, Jacqueline A. Miller<sup>1</sup>, and Robert Rhatigan<sup>1</sup>

<sup>1</sup>Geospatial and Population Studies

Institute for Policy, Evaluation & Applied Research

1 University of New Mexico MSC06 3510

Albuquerque, NM 87131-0001

*\*Corresponding Author: Email: [bjivetti@unm.edu](mailto:bjivetti@unm.edu) | Phone: 505-277-2212*

## ABSTRACT

*Kenyan citizens have a choice of identifying priorities for investments which range from education, infrastructure, like roads and bridges, security, like the police and military, agricultural development, energy supply, and healthcare, among others. Under the prevailing economic challenges, the Kenyan health sector has been struggling for funding. Recently, the government of Kenya decided to import doctors from Cuba. Considering the rising cost of health care and an increasing demand for healthcare due to population growth, raising taxes or charging higher user fees are some of the options the government may resort to in order to sustain public health care expenditure. This study determined the demographic, geographic, and governmental factors that are associated with the willingness of Kenyans to pay more taxes for funding health care. Perceptions of government's performance and trustworthiness are reflected in the public's opposition to paying higher taxes. This study is important because it highlights the growing debate surrounding the financing of universal health coverage in low-income and middle-income countries. Data obtained from the 2014–2015 Afrobarometer surveys and cover opinions on governance, public-sector performance, and how public health care is prioritized. Data analysis involved descriptive statistics,*

*correlation, and multiple linear regression. The study findings lead to the conclusion that there is a correlation between demographic, access, perceptions of governance, and perceived official corruption. The study finds the need to improve transparency and accountability of revenue authorities and public institutions in Kenya.*

*Keywords:* Kenya, health care funding; taxes; policy; Kenya universal health care

## INTRODUCTION

### *Background to Health Kenya Policy*

Kenya's original health policy was a post-colonial nation-building, socio-economic development blueprint (1965) that focused on elimination of diseases, poverty, and illiteracy. It was a three-tier system involving district, provincial, and national levels run by the central government; missionary facilities at the sub-district levels, and local governments in urban areas (Mohajan, 2014; USAID, .; Wamai, 2009). Utilization of health facilities is a function of health status, health-seeking behavior, and cost or quality of services. The cost of health services is still a major impediment to most Kenyans. About 70-80% of the population resides in rural areas and an estimated 46.6% live in poverty and on less than \$1 a day. Therefore, availability of health facilities

does not always guarantee utilization (Wamai, 2009).

Geography influences the size, population, overall health, and social economic indicators. Kenya has a network of about 5000 facilities which occur as national, provincial, district, health centers and dispensaries (Mohajan, 2014). The distribution of these health facilities in Kenya is still uneven. For instance, Central Kenya and areas surrounding Nairobi are well endowed while Nyanza and Western and Rift Valley regions which are considered as “worse-off” (Wamai, 2009).

#### *Health Sector in Kenya*

The main actors in Kenya’s health sector include the public sector represented by the Ministry of Health; the private sector (for-profit and private not-for-profit); alternative medicine practitioners; individuals and households; and development partners such as ng United States Agency for International Development (USAID), United Kingdom’s Department for International Development (DFID), the European Union (EU) and the China government as the main ones. The health facilities are owned by the government of Kenya (41%), by non-governmental organizations (15%), and 43% owned by private businesses (Mohajan, 2014).

*Table 1*

*Levels of Service in The Kenya Health System After the Devolution of Health Functions in 2010*

<b>Definition</b>	<b>Level</b>	<b>Description/Type of Facility</b>
<b>National Level</b> Self-autonomy, Highly specialized care	Level 4	National Referral & Private Hospitals
<b>County Level</b> All former public and private hospitals	Level 3	County Hospitals
<b>Primary Level</b>	Level 2	Primary Care facilities

#### *Devolution of the Health Sector in Kenya*

For a longtime, the Kenya Health Policy Framework Paper of 1994 has been guiding the health sector development with the aim of providing quality healthcare that’s acceptable, affordable, and accessible (Wamai, 2009). In 2010, a new constitution was enacted which subsequently devolved health functions to the county governments. Currently, the policy focus is on primary health care and universal healthcare access for all citizens per the constitution. The policy is guided by macroeconomic structural frameworks such as Kenya’s Vision 2030, Millennium Development Goals of 2015, and the Sustainable Development Goals of 2030 (Bitta et al., 2017; Mohajan, 2014; Wamai, 2009).

This decentralization of healthcare functions to the county governments elicited a series of challenges pertaining to planning, budgeting, misaligned policies, inadequate participation of the community, technical inefficiency, resource management, procurement, as well as financial and information management (Mohajan, 2014; Tsofa, Molyneu, Gilson, & Goodman (2017). There are now four levels of service delivery as explained by Table 1.

All dispensaries, health centers, and maternity homes in both public and private sectors

**County Level**

All health community-based activities and services organized within the community Level 1

Community Health Centers and Dispensaries

---

*Financing Health Sector*

Financing healthcare still faces numerous obstacles for adequate healthcare delivery in developing countries (Esamai et al., 2017). According to The National Health Accounts for 2015-2016, the health sector expenditure was \$ 3.476 billion or 5.2% of Kenya's gross domestic product (GDP). Sources include from government of Kenya (30%), households or out-of-pocket expenses (51%), the National Hospital Insurance Fund (16%), and donors (3%) (from Japan, U.S., U.K., China, and the European Union (Mohajan, 2014; Mwai, 2016; USAID, ; Wamai, 2009).

*Challenges to The Health System in Kenya*

Kenya's health challenges began in the 1970s-1980s leading to a degeneration of services despite advances made in medicine during the period and largely driven by widespread poverty and a rapidly growing population. In the 1990s, the socio-economic and political environment further worsened the status of health sector (Wamai, 2009). These challenges reflect the high burden of both communicable and non-communicable diseases. Thus, the leading causes of morbidity and mortality in Kenya are tuberculosis, HIV-AIDS, malaria, and high incidences of maternal, fetal, and neonatal mortality. Inadequate health infrastructure limited human resources, and other health care inputs ultimately increase the distribution of inequalities that lead to a reduction in the utilization of health services (Esamai et al., 2017; Mohajan, 2014).

Currently, the main objective is to reverse downward trends, and improve quality of services and efficiency in service delivery. However, the interventions in some key areas are affected by the absence of a comprehensive approach (Mohajan, 2014). Therefore, there's need for a system approach for improving the healthcare system in Kenya. Such an approach could address existing deficiencies of poor funding, operational and management of healthcare facilities, the quality of service, the capacity for planning, budgeting, and governance. Most important, it will hasten the desired health reforms, resource management, and policy implementation (Esamai et al., 2017).

THE STUDY

*Problem Statement*

Kenyans have a choice of identifying priorities for investments which range from education, infrastructure, like roads and bridges, security, like the police and military, healthcare, agricultural development, energy supply. However, the Kenyan health sector has been struggling with funding. Considering the rising cost of health care and an increasing demand for healthcare due to population growth, raising taxes or charging higher user fees are some of the options the government uses to sustain public health care expenditure. This study will determine the socio-demographic, geographic, and governmental factors that are associated with the willingness of Kenyans to pay more taxes for funding health care.

*Rationale*

Perceptions of government's performance and trustworthiness are reflected in the public's opposition to paying higher taxes. This study is important because it highlights the growing debate surrounding the financing of universal health coverage in low-income and middle-income countries. Tax-financed spending to pay for improvements in health care provision exposes the rising burden imposed on the taxpayers in such locations. The findings have implications on the policy formulation because tax revenue is a key element affecting universal healthcare policies formulation. Additionally, it highlights the portion of the gross domestic product (GDP) allocated to health care.

### *Methodology*

#### *Data Collection, Variables of Study, and Analysis*

Data was obtained from the 2014–2015 Round 6 of Afrobarometer surveys (see <http://www.afrobarometer.org>), which were conducted in 36 African countries. The surveys cover opinions on governance, public-sector performance, and how public health care is prioritized. Afrobarometer used face-to-face interviews in the language of the respondent's choice with nationally representative samples of between 1200 and 2400 respondents.

The dependent variable used to measure the willingness of Kenyans to pay increased taxes for funding health care was Q65C, "If the government decided to make people pay more taxes or user fees in order to increase spending on public health care, would you support this decision or oppose it? The independent variables that were used to explain or predict the dependent variable were measured as follows: Q8C: Going without medical care over the past year; Q52: Trust in the President, Police, Tax Department, and Parliament (Q52A, Q52B, Q52C, Q52D, Q52E, Q52F, Q52H, Q52I,

Q52J, Q52K); Q53: The level of perceived corruption in the tax department, the President and the officials in the office, and parliament (Q53A, Q53B, Q53C, Q53D, Q53E, Q53F, Q53J); Q55C: Difficulty in obtaining medical care; Q55D: Paying bribes to obtain medical service at public hospitals; Q68: Job performance of the President, member of parliament (MP), and local government councilor (Q68A, Q68B, Q68C). The social economic status was measured by resources owned like radio (Q91A), television (Q91B), motor vehicle, car, or motorcycle (Q91C), and mobile phone (Q91D). We also explored technology use of mobile phone (Q92A) and the internet (Q92B); and plumbing issues like source of water (Q93A), and location of the toilet or latrine (Q93B). The demographic measures included age, sex, educational level (Q97), and employment status (Q95). Geographic factors comprised the urban or rural sampling units from Kenya's Nairobi, Central, Eastern, Rift Valley, Nyanza, Western, North Eastern, and Coast regions.

Data analysis involved descriptive statistics, correlation, and multiple linear regression. The three regression models were how often have you gone without medical care, difficulty in obtaining medical care, and paying bribes to obtain services at public hospitals.

## FINDINGS

### *Descriptive Statistics*

Majority of the respondents were from the rural sampling unit (63.6%) while urban sampling unit was 36.4%. In terms of sex, there were more males (50.1%) than females (49.9%). An estimated 40.8% reported their employment status as full time, 20% part-time, 17.9% not employed but looking, and 21.1% not employed and not looking. The education levels were reported as no formal schooling (6.5%), informal

schooling only (1.8%), some primary schooling (17.9%), primary school completed (18.3%), some secondary school (12.8%), secondary school / high school completed (23.6%), post-secondary qualifications, other than university (13.5%), some university (1.6%), university completed (3%), and post-graduate (0.8%). The frequency of going without care were reported as just once or twice (21.8%), several times (19.2%), many times (6.6%), always (1.4%), and never (50%). Paying a bribe to receive treatment a public clinic or hospital reflected once or twice (5.4%), a few times (2.2%), often (0.8%), and never (64%). The difficulty to obtain treatment was reported as Very Easy (13.4%), Easy (29.2%), Difficult (22.6%), and Very Difficult (9.2%). Regarding the willingness to pay more taxes to increase health spending, the respondents stated they would Strongly oppose (48.1%), somewhat oppose (17.1%), neither support nor oppose (8%), somewhat support (12.2%), strongly support

(9.9%), while some said it depends (3.2%), and don't know (1.4%).

### *Associations and Correlations*

As seen in Table 2 below, the willingness to pay or support paying user fees or higher taxes correlates with how people perceive the state of the healthcare system in Kenya, government performance, trust, and or corruption in the government systems. Perception of corruption in government institutions elicited negative correlations with the willingness to pay more taxes to fund healthcare, and also affected the level of trust in government institutions. Trust in government institutions was positively correlated with the willingness to pay more taxes to fund the healthcare. Demographic factors like age, education level, sex, employment status, and location of residents were critical in determining the willingness to pay or support paying user fees or higher taxes.

Table 2

### *Correlations Between Perceptions of The Residents and Their Willingness to Pay or Support Higher Taxes to Fund Health Care in Kenya*

Measure	N	Mean	SD	Correlations														
				1	2	3	4	5	6	7	8	9	10	11	12	13		
1 How often gone without medical care	2394	0.86	1.036	1														
2 Difficulty to obtain medical treatment	1781	2.34	0.916	.219**	1													
3 Pay bribe for treatment at public clinic or hospital	1735	0.17	0.517	.163**	.318**	1												
4 Trust in government	2394	1.725	0.65156	-.108**	-.248**	-.102**	1											
5 Corruption in government	2374	1.547	0.54354	.179**	.123**	.131**	-.458**	1										
6 Performance	2386	2.671	1.146	-.196**	-.255**	-.108**	.554**	-.396**	1									
7 Technology use	2394	2.338	1.0849	-.255**	-0.037	-0.011	-.065**	0.029	-0.016	1								
8 Plumbing	2394	2.209	0.5494	.277**	.056*	0.015	0.031	-0.028	-0.021	-.410**	1							
9 Resources owned	2394	2.19	1.0507	-.231**	-0.026	0.031	-.047*	0.038	0.018	.515**	-.366**	1						
10 Employment status	2391	1.84	1.84	-.149**	-0.024	-0.023	-0.006	0.007	0.008	.258**	-.192**	.376**	1					
11 Gender	2394	1.5	0.500	0.01	0.009	0.024	0.024	-0.002	0.017	-.108**	0.003	-.152**	-.089**	1				

12	Education respondent	of	2393	3.86	1.923	.308**	-0.033	-0.026	.081**	0.035	0.004	.607**	.418**	.458**	.270**	.128**	1	
13	Urban or rural Primary Sampling Unit		2394	1.64	0.481	.106**	.082**	-0.04	.123**	.077**	.057**	.291**	.308**	.227**	.104**	-0.002	.269**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).  
\* Correlation is significant at the 0.05 level (2-tailed).

### Multiple Linear Regressions

At a 95 per cent confidence level, the three models used were significant in estimating the statistical relationship between the variables. Model 1 asked how often one has gone without medical care; model 2 was about difficulty in obtaining medical care, while model 3 explored paying bribes to obtain medical service at public hospitals. In model 1, residents living in Central Kenya were less likely to go without medical care compared to other regions. Going without medical care also reduced the trust in

government institutions, performance, and ultimately the willingness to support paying higher taxes for funding healthcare. In terms of socioeconomic indicators, those who owned resources were less likely to go without medical care. Apparently, this meant a higher socio-economic status. In model 2, Rift Valley, Nyanza, and Western regions were more likely to experience difficulty in obtaining medical care compared to Central and Nairobi regions. In model 3, those in Rift Valley, Western, and Coast regions were less likely to experience paying bribes to obtain service at public hospitals (see Table 3).

Table 3

*Multiple Linear Regression Models for Associations Between Perceptions of The Residents and Their Willingness to Pay or Support Higher Taxes to Fund Health Care in Kenya*

	<b>Model 1: How often gone without medical care</b>	<b>Model 2: Difficulty in obtaining medical care</b>	<b>Model 3: Paying bribes to obtain medical service at public hospitals</b>
	<i>Standardized Beta</i>	<i>Standardized Beta</i>	<i>Standardized Beta</i>
Age (in years)	0.265	-0.107	-0.11
Age Squared	-0.220	0.071	0.074
Gender (Male = 1, Female = 2)	-0.027	0.006	0.018
Urbanicity	0.006	-0.072	-0.03
<b>Province (ref = Nairobi)</b>			
Central	-0.079	-0.070	-0.002
Eastern	-0.010	-0.150	-0.032
Rift Valley	-0.003	0.153	0.07
Nyanza	-0.081	0.049	-0.024
Western	-0.079	0.060	0.009
North Eastern	0.040	-0.104	-0.054
Coast	-0.027	-0.030	0.014
<b>Socioeconomic Indicators</b>			
Employment status	-0.036	0.016	-0.02

Education	-0.157	-0.033	-0.057
Technology Use/Access	-0.049	-0.024	-0.022
Plumbing Access	0.151	0.022	0.017
Resources owned	-0.580	0.008	0.067
<b>Government Factors</b>			
Trust in Government	-0.034	-0.149	-0.032
Corruption in Government	0.120	0.015	0.099
Performance of Government	-0.140	-0.192	-0.08

## DISCUSSION AND CONCLUSION

This study aimed at exploring the willingness to support or oppose paying higher taxes or user fees in order to increase government spending in healthcare. The study findings lead to the realization of the association or correlation with demographic, access, perceptions of governance, and perceived official corruption. Similar attributes are common in developed countries. Perception of corruption in government institutions leads to negative correlations with the citizenry. The same can be said about the government performance. However, trust in government institutions led to positive correlations. The findings suggest the need to improve transparency and accountability of revenue authorities and public institutions in Kenya. The study recommends strengthening rural community health initiatives in response to the rising

disparities across the regions. Moreover, the healthcare expenditures should also address the acute shortage of health personnel particularly in the regions where people go without care for prolonged periods. The government of Kenya also needs to pay attention to the tax burden imposed on the taxpayers through tax-financed spending to pay for improvements in healthcare provision. Research findings of this nature have implications on the policy formulation because tax revenue is a key element affecting universal health care.

### *Study Limitations*

The study had some limitations that included the dataset used for the analysis. The research question used was useful but means very different things to different populations. Similarly, in Kenya, only the formal sector pays payroll tax, so everyone else would agree on raising those taxes.

## REFERENCES

- A Closer Look at The Healthcare System in Kenya. . Retrieved November 7, 2018, from <https://www.pharmaccess.org/wp-content/uploads/2018/01/The-healthcare-system-in-Kenya.pdf>
- Bitta, M. A., Kariuki, S. M., Chengo, E., & Newton, C. R. (2017). An overview of mental health care system in Kilifi, Kenya: results from an initial assessment using the World Health Organization's Assessment Instrument for Mental Health Systems. *International journal of mental health systems*, 11(1), 28.
- Esamai, F., Nangami, M., Tabu, J., Mwangi, A., Ayuku, D., & Were, E. (2017). A system

- approach to improving maternal and child health care delivery in Kenya: innovations at the community and primary care facilities (a protocol). *Reproductive Health*, 14, 1–18.
- Mohajan, H. K. (2014). Improvement of Health Sector in Kenya. *American Journal of Public Health Research*, 2(4), 159–169.
- Mwai, D. (2016). Kenya National Health Accounts FY 2015/16. Retrieved November 7, 2018, from [https://www.researchgate.net/publication/321864804\\_Kenya\\_National\\_Health\\_Accounts\\_FY\\_201516](https://www.researchgate.net/publication/321864804_Kenya_National_Health_Accounts_FY_201516)
- Tsofa, B., Molyneux, S., Gilson, L., & Goodman, C. (2017). How does decentralisation affect health sector planning and financial management? a case study of early effects of devolution in Kilifi County, Kenya. *International Journal for Equity in Health*, 16(1), 151.
- United States Agency for International Development. . *The Healthcare System in Kenya*. Retrieved November 7, 2018, from [https://www.usaidassist.org/sites/assist/files/kqmh\\_in-service\\_training\\_module\\_1.1.pdf](https://www.usaidassist.org/sites/assist/files/kqmh_in-service_training_module_1.1.pdf)
- Wamai, R. G. (2009). The Kenya Health System—Analysis of the situation and enduring challenges. *Jmaj*, 52(2), 134–140.