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Fiscal Federalism and Health Impact In Developing Economies: A Perspective Of Kenya

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Abstract
The study aim was to examine the interaction between fiscal federalism and health service provision in Kenya. It adopted a longitudinaldescriptive research design. Secondarypanel data for the four years across the forty-seven counties in Kenya. This data was obtainedfrom Kenya National Bureau of Statistics and from fiscal department in devolved units. The study applied a fixed-effects model for data analysis.The disease burden in Kenya for communicable diseases was found to be moderate since morbidity rate was found to be 2.7%. Vertical balance inversely relates with morbidity indicating that level of fiscal federalism that has occurred in Kenya so far is yet to sufficiently meet the required threshold. Regarding the effect of County expenditure on health on morbidity, coefficients are negative as expected but statistically insignificant. Findings do not support extant theory in favour of fiscal federalism. Management of health care as a public good is a highly controversial subject. The health care system in Kenya has been decentralised for many decades. Devolution therefore would be expected to concretise the gains made in the decentralisation era and make health more accessible and reduce the disease burden for Kenyans. Since this has not been established in this study, policy makers have to work hard to determine how the inter-governmental fiscal relations and other fiscal gaps established in this study can be smoothened for better impact.
Key words: *Fiscal federalism; health impact; intergovernmental fiscal transfers, morbidity ratio.*

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I. Introduction

It is every progressive government's intention to improve the livelihoods of its citizens. In developing countries Kenya included, access to basic human rights including the right to quality health is not guaranteed. However, democratic and institutional reforms hallmarked by the promulgation of new constitution in 2010, set in motion a devolved system of government. This designated forty seven governance units referred to as counties and devolved many functions of citizen service provision and economic development previously managed by the national government key among them health services. The underlying economic principle to the foregoing action is fiscal federalism. Fiscal federalism is a form of fiscal delegation. According to Bird and Vaillancourt (1998) it denotes to the transfer of fiscal authority from central to devolved units of governments. In other words, fiscal federalism is an attempt to bridge the gap between policy making and expenditure decisions towards improved service delivery. Oates (1999) opines that devolved units being closer to the people, are by nature more cognitive to the particular preferences of their communities and will be able to find new and better ways to provide these services hence realize the so called "different advantages". Equally it is expected that devolved units of government will take time to determine development priorities and build strategies for implementation. Devolved governments are considered more proficient in assessing and addressing the needs of local communities as compared to the national counterparts.

However, the rationale of devolution from an infrastructure capital development perspective may be expensive since it occurs in a fragmented manner without requisite expertise and coordination. Economies of scale may also be foregone. The converse though is that devolution is cognisant of the fact that service production costs are differential across local administrative units and this heterogeneity does deliver savings. Generally, devolved services in most jurisdictions are predominantly education, health and agriculture.

Though there have been many initiatives to enhance health as a public good in Kenya, the most significant effort could be attributed to the development of Kenya Health Policy Framework (KHPF) in 1994, by the Government of Kenya (GOK).According to Muga et al (2005), this blueprint focused on improving health sector expenditure, efficient utilization of resources, devolved decision making, creating a responsive management information systems, updating the legal and regulatory environment, enhancing management skills of health care managers and reducingthe burden of disease amid rapid population growth. A raft of changes were made as a result which included establishment of a ministerial reform committee and a rationalization program in the ministry.

In the more recent past, milestones in this sector have come in the form of policy, legal and regulatory frameworks that accompany various forms of financing as summarised by especially as regards to universal health care Abuya et al (2015). However, as observed by Chuma and Maina (2012), health in Kenya is financed predominantly financed by ordinary citizens though out-of-pocket payments which are barely sustainable. This is one issues that have encouraged devolution of the health function as the government tries to pursue the attainment of universal health care.

Health care is decentralised in countries such as Canada, US, India, China, Chile, Colombia, Denmark and in Kenya among others. Whereas there are variant reasons why health care has been targeted for devolution, proponents have argued that transferring power to local governments would improve efficiency, equity and access. In return, health outcomes would become more certain by bringing decision makers closer to the people and by enhancing the participation of the community in the decision making and implementation processes (Robalino et al., 2001; Besley and Burgess, 2001). Further, Pedersen Christiansen, &Bech (2005) studying the Danish devolved health system found out that its devolution has brought about greater adherence to budgets, greater staff performance and utilisation of resources as well as higher customer satisfaction long periods of waiting for treatment notwithstanding. This goes to show devolved units go a long way in improving health care provisions among their constituents.

In Kenya, even before the onset of devolution, health provision was decentralised to the lowest levels of administrative units. According to Munge and Briggs (2013) Health care in Kenya is provided through public health-care services is divided in six tiers. The highest level of care being provided in tier being level 6 which are referral hospitals to level 1 which are designated as dispensary being the most basic care. Devolution has meant that county governments now manage all the hospitals except for national referral hospitals which are semi-autonomous agencies under the ministry of health. The import of this is that devolved units of government are now responsible for day to day decisions regarding fiscal allocations for infrastructure, human resource and interventions for disease control at their jurisdictions.

As such these positive outcomes will depend on per-capita health expenditures, funding equity, and supply structure which will be varied in economies and the attendant administrative units. Similarly, as recognised by Pedersen et al (2005) political, financial, and operational decentralisation are key success ingredients. In Kenya, though the legal and financial framework have been clarified, operational weaknesses coupled with political setbacks witnessed in health workers strikes may have dented the ability of the counties to deliver quality health care. On the other hand, according to Republic of Kenya (2016) expenditure on health services by county government has grown from a paltry 5% of total government expenditure in 2013 to around 20% in 2015. This goes to show that county governments are receiving requisite budgetary support from the national government and have also become cognisant of the stakes involved in management of health services.

It is not clear however whether these incremental changes in the fiscal environment are causing improved health services hence the need to clarify empirical position of fiscal decentralisation and health care in an environment characterised by low economic growth, high burden of disease and budding devolution expectations as is the case in Kenya. This is what this paper is set to achieve

The Kenyan fiscal administrative system consists of a national government and forty seven subnational levels of government, which are referred to as counties. The local governments consist of several sub counties and wards. Wards representatives are the members of the county assembly which is the local legislative council which is mandated to legislate on how fiscal resources available to the counties will be applied in service provision.

County Governments receive budgetary allocations from the National Government as equitable share of revenue, as well as conditional allocations for specified projects. In addition, counties may receive as facilitated by the national government conditional grants such as the one currently in force which is from the Danish International Development Agency (DANIDA) as conditional grant to the Health Sector.

While the national government manages some aspects of the health system such as state corporations which comprise of national referral hospitals, specialised research and education institutions and state health insurance corporation, the counties have a mandate to provide health services to the local communities. County governments therefore fund, manage and run health care centres under their jurisdictions through the counties health ministries and respective health boards. These health facilities are classified as level 5, level 4, level 3, health centres and dispensaries in order of capacity, resources availability and ability to manage health cases.

II. Literature Review

The key theoretical question pertaining to fiscal federalism is: what are economic benefits of federalism? To which many scholars of contemporary economic theory have tried to address through various discourses.

Though there are multiple benefits to be derived from such efforts, this study prefers to concentrate on perspectives of Musgrave (1959) and Oates (1999) who opine that federalism allows citizens to sort themselves and match their preferences with a particular menu of local public goods. If this is accompanied by appropriate assignment of expenditures and taxes to the various levels of government this could increase welfare on both locally and nationally.

This decentralization theory also presumes according to Oates (1972) that economies have similar development needs irrespective of geographical clusters hence central governments can engage in increasing stock of public goods for the general use of the whole nation such as national highways and ports while local government can tailor public goods output to local needs and aspirations. The theory is thus applicable in this study because the way health management has been structured, it leaves common issues that require investment in infrastructure and mechanism which foster curative and promoted health. These issues cannot be said to be a reserve of some counties irrespective of whether they are urban or rural or different in their socioeconomic stratum.

Generally, though it should not be assumed that fiscal federalism is a magic bullet, studies have shown that sometimes fiscal federalism does promote competition between various levels of government as opposed to co-operation Gamkhar and Pickerill, (2012). These authors also acknowledge that competition tends to be fashioned along the lines of credit taking in so far as service delivery is concerned to the electorate without necessarily matching the costs of such undertakings. This essentially means poor service delivery and blame shifting with no one to take responsibility of.

Another set back in the use of fiscal federalism theory is that local authorities when faced by undesirable pressures from national government will provide resistance as expected though the motivation is not to benefit the citizens but to promote self-interest(Clavel, 2013). Again, this translates to situations where fiscal decisions made go against the very essence of decentralisation.

Policies that follow the federalism principle will ensure that there is an increase in transfers or taxes made available to devolved units of government. Whether such an increase positively impacts health outcomes or not is an empirical question. Faguet (2004); Faguet (2012); Faguet and Sanchez (2014) in a series of studies conducted in Bolivia spanning since 1994 observed an increase in devolved funds to local governments, which was accompanied by commensurate additional responsibility for public services which led to establishment of oversight committees. Despite these positives, the investment in health did not significantly change when compared to the situation before devolution.

Similar findings have been made by Skoufias et al (2011) who while studying the Bangladesh devolved system found that overall public expenditure increase among the counties did not result in any significant change in health spending. These findings reinforce the importance of matching preferences as a precondition for positive impact.

In addition to effective matching of preferences, positive impact may also occur because of direct effects by national governments made universally to all devolved units or as a result of benefits spilling across county governments. Akin et al (2005) found that share of allocation to health decreased in decentralisation era in Uganda especially in local budgets aimed at facilitating preventive and primary health care areas expenditure financed by local governments. This has been attributed partly to the presence unconditional grants from national government. It therefore points to the fact that local governments do not find the rationale to apply these grants to the purpose intended hence failure to achieve the level of health service required.

Other studies have been more forthwith in considering the link between fiscal decentralisation and health service efficacy. Jiménez-Rubio (2011) while studying a sample of OECD countries found a significant and positive correlation between fiscal decentralization and reduced Infant Mortality Rates (IMRs). However, this was only true in local governments with considerable degree of autonomy in so far as determining sources and application revenue or taxes.

Though on paper, county governments are expected to manage health without influence from national government. In Kenya, governors the principal heads of county government have in many occasions complained about interference from the state in terms of managing health budgets, management of health professionals and purchase of equipment. A case in point is the reluctance by governors to subscribe to a medical equipment scheme intended to equip 98 county government hospitals as mooted by the national government on the pretext that they had not been consulted prior to the implementation of the project.

The study by Jiménez-Rubio (2011) also observed that when an increase in proportion of health care expenditure on GDP was observed, it resulted to a greater contribution to the reduction of infant mortality.

Given the economic characteristics inherent in OECD countries, similar findings may not be inferred in a developing country scenario.

In another study focusing on IMR as a health end point, Uchimura and Jutting (2009) observed consistently high levels of spending decentralization in china which however was met by a growing recentralization of revenue decisions since 1994. They however report a significant relationship between some proxy variables for fiscal federalism and IMR. Specifically, this study finds that an increase relative expenditure in county government results in reduced IMR. Again, these authors are quick to note that IMRs are lower in local governments which have made an effort to strengthen fiscal capacity is coupled with a functional transfer system. This somewhat resonates with the legal guidelines available in the Kenya devolution case and the conjecture is expected to hold.

Apparently, similar findings have been observed even when rural local governments were studied. Asfaw et al. (2007) have demonstrated empirical evidence pointing to a statistically significant and negative relationship between decentralization and IMR. They actually indicate that having an above average decentralization index is associated with a 17.16% reduction in IMR as compared to states with below average fiscal decentralization scores.

It has been suggested by scholars such as Liu et al (2014) that weaknesses in intergovernmental transfers and socio-economic disparities can be cured by local government equalization fund mechanism. This however may not bring about the expected results in improved health care. Robalino et al (2001) demonstrated that if a country with a GDP per capita of USD 2000 increases its share of expenditures managed by local governments by 10%, this would be associated with a paltry 3.6% decrease in mortality rates. Robalino et al. also find evidence to show that the benefits associated with fiscal decentralization may have a U-shaped curve with respect to GDP per capita, implying that countries with low and high incomes are more likely to benefit from the reform than middle income countries. They conclude that decentralization benefits are “particularly important for poor countries” (Robalino et al. 2001). This conclusion may stand in the face of a national economy but may yield very different results in a federal environment such as Kenya.

The most immediate discourse points to an understanding that fiscal federalism when conducted efficiently does deliver improved service delivery in varied socioeconomic circumstances. This therefore an empirical basis upon which the theory positedin this discourse can be tested in a young fiscal federalism case such as Kenya.

III. Methodology

This study is a longitudinal descriptive study spanning four years (2013-2016). The paper seeks to determine the interaction between fiscal federalism and health care management. The period covered represents the initial devolution election cycle occurring after promulgation of Kenyan Constitution 2010. The study obtained secondary panel data for the four years across the forty-seven counties. Data was obtained from Kenya National Bureau of Statistics and from county governments. This study therefore serves as an empirical base line for measurement of fiscal federalism effectiveness as regards to health care in Kenya. The empirical model is considered below.

The main research questions in this study is to assess whether fiscal federalism as witnessed in Kenya improves health care delivery. An empirical assessment applied a fixed-effects model with the following structure to our panel dataset: The basic model is:

$$Y_{it} = \alpha + \beta X_{it} + \lambda C_{it} + \mu_{it}$$

where *i*indexes the county and *t*is time. *X* denotes fiscal federalism indicators; *C* denotes the control variables *y* is the general population morbidity rate and µis an error term. The following variables are used in the empirical analysis.

The dependent variable in our model is measured by county morbidity rate for the four most common communicable diseases which afflict persons above the age of five. These are clinical malaria, pneumonia, diarrhoea and tuberculosis. According to Muga et al, (2005), Malaria is responsible for one in every three morbidity cases Kenya. They continue to observe that high prevalence can be witnessed in respiratory illnesses, diarrhoea, and intestinal parasites hence the choice of the three to represent the morbidity frame.

To quantitatively examine fiscal federalism in the county, the study uses the two indicators: vertical balance (VB) as defined by Uchimura and Jutting (2009) and the ratio of county expenditure on health (RCEH). The two indicators are defined as follows:

Vertical balance is the proportion of county expenditure on health over the revenue derived by the county in a certain period. In this study we assume that health is the only expense item required by the devolved units of government.

Ratio of county expenditure on health (RCEH) is the proportion of periodic county expenditure on health to national expenditure on health. RCEH was measured as the ratio of aggregate counties’ expenditure on health to the total fiscal expenditure of health by the national government. The index serves a dual purpose: it assesses the comparative significance of counties as public service providers and the extent of fiscal decentralization in the county.

Socioeconomic characteristics are important for controlling the effect between the response and predictor variables in the model. Population density in the county per square kilometre is the proxy socio variable. Economic characteristics are measured by the county's per capita expenditure on health.

IV. Results and Discussions

Table 1: Variable characteristics

Variable	Obs	Mean	Std. Dev.	Min	Max
Morbidity Rate (MR)	188	2.7700	1.9729	.1419	9.5080
Vertical balance (VeB)	188	.9523	.2095	.1223	1.7081
Ratio of county exp.-health (RCEH)	188	.0250	.01551	.0019	.08379
Population density	188	452.5319	1013.374	4	6088
Per capita exp. Health	188	1.8998	1.0558	.24	5.89

The disease burden in Kenya for communicable diseases was found to be moderate since morbidity rate was found to be 2.7%. However, in some counties this was seen to span to 9.7%. The reduction in disease burden among the population is very varied with some suffering its ravages, while some county residents can be said to have somewhat benefited from health care devolution. This is also an indication that primary health care is a major issue in Kenya like in any other low-income country. Fiscal decentralization policy if well implemented can go a long way in improving the welfare of the larger population who depend on the public sector to meet their health needs.

Vertical balance was used in this study as a proxy for fiscal federalism. The mean is observed as 0.9522 while the maximum value is 1.7082 as indicated in Table 1. If vertical balance is greater than one, aggregate county expenditure exceeds aggregate county own revenue. The mean is thus borderline which is again confirmed by the maximum value. This indicates even though the national government are providing counties with intergovernmental revenue transfers, there still exists a fiscal gap in the counties that has to be filled. It is also inferred that national government is allocating more funding to health policy initiatives as opposed to provision of primary health care. It is notable also that though fiscal federalism was barely five years old in Kenya at the time of this study, progress is being made to reduce this gap in so far as the health budgetary provision is concerned.

Other findings indicate that the ratio of county expenditure on health in comparison with national government is very low meaning that the national government is still holding on to a large part of the budget irrespective of devolving major health care management functions. This is also evidenced by the low average per capita expenditure in health by counties which again shows competing funding priorities.

Table 2: Fixed-effects (within) regression model

Morbidity Rate	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
Vertical balance(VeB)	-.21587	.31784	-0.68	0.501	-.85687	.4251
Ratio of county expenditure-health (RCEH)	-2.2954	1.5697	-1.46	0.151	-5.4610	.8703
Population density	4.3086	1.1952	3.605	0.0002	-3.4834	2.1441
Per capita exp. Health	1.4710	0.5525	2.663	0.0042	-.8161	5.4456
_cons	-7.8101	4.199	-1.860	0.0322	-14.4895	2.4467
Number of observations	188		Hausman test		0.000	
Number of groups	47		F(4,43)		0.05	
R-squared: (within)	0.5954		Prob > F		0.0050	

Table 2 summarizes the main results which is within fixed effects for panel data. We start by examining the effect of vertical balance (VeB) on morbidity ratio (MR). VeB coefficient is negative hence a negative relationship between VeB and MI thus when VeB increases, MI decreases. These findings are in tandem with evidence advanced by Uchimura &Jütting (2009); Akin, et al, (2005) and Asfaw et al, (2007). However, this relationship is not significant. Since vertical balance captures the importance of intergovernmental fiscal transfers, this finding serves to indicate that the level of fiscal federalism that has occurred in Kenya for the last four years is yet to sufficiently meet the required threshold. As such, either the county governments are not doing enough to harness revenue or taxes or the national government transfers are not reciprocal.

Regarding the effect of RCEH on MR, again coefficients of RCEH are negative as expected but statistically insignificant. in assessing the relative importance of counties as public service providers this study observes that while that all important journey has started as indicated by the decrease in morbidity, the extent of fiscal decentralization in the county in so far as health services are concerned cannot be vouched for.

With respect to the control variables, economic development as proxied by per capita expenditure on health certainly yields to better health outcomes. Conversely, a higher population density may wipe such gains hence the positive interaction with morbidity.

V. Conclusions

In conclusion, this paper advances a position which supports more fiscal transfers to local governments as an important vehicle to attaining better health services as well as other development outcomes. Fiscal federalism however as envisaged in this study is yet to be achieved.The study also concludes that unless fiscal inequalities are addressed healthcare provision in the country will continue relying on out-of-pocket payments which is an affront towards the attainment of universal health care as envisaged by social development goals and national development blueprints in Kenya.

In addition, the attendant fiscal theory espoused herein cannot be proven which mean preference matching by devolved units of government as espoused by extant theory in support of fiscal federalism is fairly weak.

The study recommends that county governments proactively address fiscal gaps between expenditure and revenues by improving tax bases and efficacy in collecting such taxes. In the same vain, the national government should be alive to fiscal empowerment of counties through improved transfers.

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