

**Political Decentralisation and Public Service Delivery: A case study of the  
Southern border region of Kenya and the Northern border region of  
Tanzania**

By

**ANGAR, Jane Mango**

**THESIS**

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

**MASTER OF DEVELOPMENT POLICY**

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Committee in charge:

Professor Wang, Shun, Supervisor



Professor Shin, Jaeun



Approval as of May, 2020

## **Acknowledgements**

I would like to acknowledge my supervising professor, Professor Wang Shun for his guidance as I wrote this paper. I would also like to thank my family and friends for all their support and encouragement.

To Paula and Selina.

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## **Abstract:**

Despite the contentions about the effectiveness of decentralization as a form of governance and administration, there has been a rise in the number of countries attempting different forms of decentralization around the world in recent decades. By investigating what impact political decentralization had on service delivery in Kenya this paper seeks to contribute in gaining more understanding of decentralization and circumstances in which it is most effective. The study takes advantage of the border region between Tanzania and Kenya to perform a natural experiment following the implementation of the county government framework of governance in 2013 through political decentralization in Kenya using difference-in-difference to examine if and what impact political decentralization had on service delivery.

# **Political Decentralization and Service Delivery: A case study of the Southern border region of Kenya and the Northern border region of Tanzania.**

## **Chapter One: Introduction**

### **Historical Underpinnings of the study:**

Kenya, like many other African countries, inherited a highly centralized system of governance in 1963 as she gained her independence. This was argued to be better for national unity and development as compared to a decentralized system (Kanyinga, 2016).

However, in the successive years, political patronage, ethnic politics and regionalism resulted in underdevelopment brought about by unequal distribution of resources and public goods. Especially as a select political elite mainly from the majority ethnic groups became politically dominant while many of the regions occupied by minority ethnic groups lacked representation in elective posts and public service (Nyaura, 2018). Consequently, there was a rise in distrust and ethnic tensions as different groups strove to control the highly centralized executive powers. Over the decades this heightened ethnic resentment which initially displayed itself in minor post-election clashes like in 1992 and 1997, but eventually culminated into the 2007/2008 post-election ethnic clashes in Kenya that almost saw the country descent into a civil war (Misati, 2011; Nyaura, 2018).

In an effort to address the underlying issues that led to the ethnic clashes in 2007,

Kenyans held a referendum where they voted in favor of a new constitution whose core reform feature was decentralization (Mbate, 2017). This was largely due to the strong conviction that the only way to achieve political stability and equal development, if any, was through decentralization (Mbate, 2017). The new constitution brought a shift from the prior highly centralized governance framework to a decentralized one. These comprised two levels of governments that consisted of the national government and 47 county governments (Gimoi, 2017; Mwenda, 2010). Under this two-tier framework of governance both levels of government are considered equal in a consultative and coordinative relationship, because they are democratically elected with authority to raise revenue (Mbate, 2017; Mwenda, 2010).

In a radical shift from the prior framework where the national government had supervisory powers over local authorities through local governments, the new county governments enjoy political autonomy because they are not directly controlled by the national government. However, they are still subject to certain national policies as approved by the Senate. This change in intergovernmental relations was meant to allow county governments to fulfill one of its main functions which is guaranteeing the proper representation of the interests of voters at the county level (Mwenda, 2010).

Gimoi (2017), rightly points out that in article 174 of the new constitution<sup>1</sup>, the rationale behind decentralization is stated as enhancing self-governance and the promoting interests of

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<sup>1</sup> <http://sokodirectory.com/2016/11/kenyan-constitution-chapter-eleven-part-1-article-174-175/>



marginalized communities as well as their right to manage their own affairs thus, furthering development, easy access to public services and promoting national unity. Simply put, decentralization by bringing decision making power for resource allocation closer to the citizenry would result in more efficient allocation of public goods, at the local level and consequently promote development and as such enhance national unity. An argument that is supported by many proponents of decentralization (Joseph, 2014; Kanyinga, 2016; Litvack et al., 1998). In this study I, will use statistical analysis to examine whether the shift in governance from a framework where the national government had supervisory power over local authorities to one where subnational governments enjoy political autonomy, through political decentralization, did in fact, result in an improvement in provision or accessibility of public services. Taking advantage of the natural boundary at the Kenya-Tanzania border, which comprises of a region that shares similarities in geographical, social, economic, and previously centralized governance, this paper utilizes difference-in-difference method to examine the impact of political decentralization to the provision of service delivery, which in this specific case refers to the provision of piped water and electricity (Coast, 2002; Tiampati, 2015).

### **The Statement of Problem and Relevance of the Study:**

According to the World Bank, by the year 2000, about 80 to 100 percent of the world's countries had been estimated to have been experimenting with some form of decentralization (Faguet&Poschl,2015). This growing emergence of decentralization as a core part of the policy

reform agenda across the globe both in industrialized countries and in developing countries, and even more salient in African countries (Smoke, 2003) has led to the rise of a substantial body of literature on this subject (Ezcurra & Rodríguez-Pose, 2010; Menon, Mutero, & Macharia, 2008; Mk, 2017; Nile, Central, September, & Bogere, 2013; Steiner, 2006). None the less, decentralization remains complex and indefinable and thus there is a need for more research in this field.

It is also noteworthy that, the majority of the literature on decentralization focuses on administrative decentralization (Mwenda, 2010; Ssonko, 2015) and fiscal decentralization (Anosisye, 2017; Arshad, 2010; Smoke & Whimp, 2011) while there is limited literature on political decentralization and its impact.

Besides, Litvack, Ahmad, & Bird, (1998) highlight the fact that the majority of the literature on decentralization is based on industrialized countries and thus there is a scarcity of literature on decentralization as it would apply to developing countries. He states that this may be because developing countries have different institutional frameworks. As such, he rightly argues that there is a lack of enough empirical knowledge that would allow scholars and practitioners to for instance make decisive recommendations on which type of decentralizations would be most appropriate for which types of service delivery in which type of institution. This paper seeks to contribute in the effort of filling this gap.

## **Hypotheses to be tested and Research Question:**

This paper hypothesizes that political decentralization, that is the creation of county governments with political autonomy from the central government in Kenya, had a positive impact on service delivery, that is, provision of piped water and electricity. The paper seeks to answer the question: "What is the impact of political decentralization on service delivery in the Southern border region of Kenya? "

## **Chapter Two: Literature Review**

### **Defining Decentralization**

Defining decentralization remains a challenge especially because it takes many forms and has several dimensions. This has resulted in a variety of institutional restructuring being encompassed by this label (Litvack et al., 1998).

There are three major dimensions of decentralization which include: political decentralization; institutional decentralization; and fiscal decentralization (Smoke, 2003). All the three dimensions are critical for achieving fully functional decentralization. According to Smoke (2003), a country has political decentralization when a subnational government, with suitable institutional instruments and capacity is equipped with clear and appropriate functions and resources and thus comprises a reduction of their accountability to the central government.

Second, in the case of institutional decentralization, the fundamental institutional architecture on which decentralization is based on involves the formal linkage of administrative bodies, systems and mechanism both local and intergovernmental. Lastly, fiscal decentralization involves the assignment of responsibilities and own-source revenue to subnational government. This paper focuses on political decentralization. It will analyses how political decentralization in Kenya, in this case the establishment of county governments with democratically elected governors and county assembly, impacted the provision of public services.

### **Conceptualizing Political Decentralization:**

This paper adopts Smoke (2003), and Spina (2013)'s definition of political decentralization as "an institutional reform that establishes additional subnational legislatures and executives". Spina points out that political decentralization can take two different forms : one, when a group with distinct ethnic , linguistic and geographical characteristics is given additional autonomy in the form of a legislative assembly as was the case with Scotland in 1999; and two, when a country sets up secondary level of political districts as was the situation in early ninety nineties in Croatia.

Kenya's political decentralization embodies both forms as new levels of governments with an executive and legislative body were created across the country in regions that have distinct geographical characteristics and tend to be occupied by ethnic groups with distinct languages (Misati, 2011; Mwenda, 2010; Nyaura, 2018).

Genuine political decentralization requires not only the creation of new levels of government, but importantly requires that these subnational levels of government possess meaningful decision-making autonomy (Brancati, 2006). Furthermore, these subnational governments should not experience any sort of intervention from the central government in terms of appointment, law-making or policy making (Spina, 2013). Fortunately, both conditions are demonstrated in Kenya's case as county governments enjoy political autonomy (Mwenda, 2010).

### **The Rationale for Decentralization:**

Existing literature reveals that not only are there many different rationales for decentralization, but, also that these rationales may not be relevant to each and every case (Litvack et al., 1998). Nonetheless, the majority of proponents of decentralization argue that decentralization in most countries is as a result of the failure of centralized systems and as such has been critical for the very preservation of many national political systems (Litvack et al., 1998).

Additionally, some scholars have argued that decentralization makes it possible to attain allocative efficiency in the face of different local preferences for local public goods (Kanyinga, 2016; Litvack et al., 1998; Misati, 2011). This is because it is assumed that as a result of decentralization, decision-making power is entrusted to those who have local information that distant bureaucrats are unable to access (Anosisye, 2017).

Anosisye (2017), further notes that since decentralization enables electorates at the local

level to hold leaders accountable during elections, it can play a crucial role in fighting corruption. Additionally, she asserts that decentralization would stir competition as subnational governments in the face of incentives like grants and legitimacy are motivated to outdo each other consequently resulting in better service delivery.

It is also argued that political decentralization can reduce ethnic conflict and secessionist sentiments through giving marginalized groups rights to self-governance, although this is still debatable (Brancati, 2006).

On the other hand, there are assertions that decentralization is not good for development as it may never be fully realized since the implementation process is usually complicated by the need to negotiate the reforms against opposing political demands (Faguet, 2015). This may be more so especially in the context of developing countries with weak institutions, so that it results in cynical decentralization where spending responsibilities may be devolved without decision making autonomy or vice versa (Faguet, 2015). This is because in these contexts central governments are more comfortable working with weak local governments that will not be opposed to directives and guidelines from them (Anosisye, 2017).

Faguet (2015), additionally argues that decentralization reforms are largely driven by motivations of political survival and consolidation of power. Spina (2013), importantly articulates this by pointing out that although ideology and decentralization reforms may seem to be highly correlated, partisan support for reform is mainly based on calculated political gain.

As such it is noteworthy to point out that for African countries, the main catalysts for decentralization have been not only failure of centralized approaches to development, but also included external pressures from international organizations and to a significant extent a semblance of attempts by political leaders to expand their influence by the creation of restructuring of local institutions(Smoke, 2003).

Nonetheless, in the Kenyan case, article 174, under chapter 11 of the 2010 Kenyan constitution bases the rationale for devolution on self-governance, economic development and equitable distribution of resources among others. That is, political decentralization by bringing the government closer to the people and allowing increased community involvement would increase local decision-making power for resource allocation and consequently improved service delivery (Gimoi, 2017).

### **Decentralization and Service Delivery:**

Right before Kenya's devolution, Rugo (2013) in his study on citizen participation and local public service delivery found out that there was minimal citizen participation in local governance and as a result this had insignificant influence on service delivery. He therefore rightly recommends that Kenya needed a system which rather than being directly linked to politicians, had a legal framework obliging local authorities to put into effect citizen's proposals, one that he thought would be achievable under the devolution framework that was to be implemented in 2013 (Rugo, 2013). Since then studies have shown that there has been an increase in public

participation in the county governance (Mbithi, Ndambuki, & Juma, 2019). This paper is premised on the argument that a politically decentralized county government system would promote public participation which enables local constituents to play a watchdog role(World Bank, n.d.) on the system in order to ensure efficient service delivery (Ekpo, 2008).

Thus when it comes to provision of public services, decentralized governments are in a better position to understand and attend to the tailored needs of local constituents as opposed to the far distance central government (Anosisye, 2017; World Bank, n.d.).

Nonetheless, this paper also takes note of the challenges that face decentralization when it comes to effective service delivery which include but are not limited to: corruption ; weak institutions ; and lack of professional capacity of local leaders as has been experienced in Uganda and other southern African countries (Anosisye, 2017; Ekpo, 2008; Kannan, 2013; Litvack et al., 1998; Smoke, 2003).

### **Context of the Study:**

This study uses difference-in-difference as a natural experiment to examine a focused comparison of the Southern border region in Kenya and the Northern border region of Tanzania. It investigates whether the change in political and institutional structure of the government had any causal impact on the wellbeing of residents of the politically administrative at the border area Of the two respective regions.



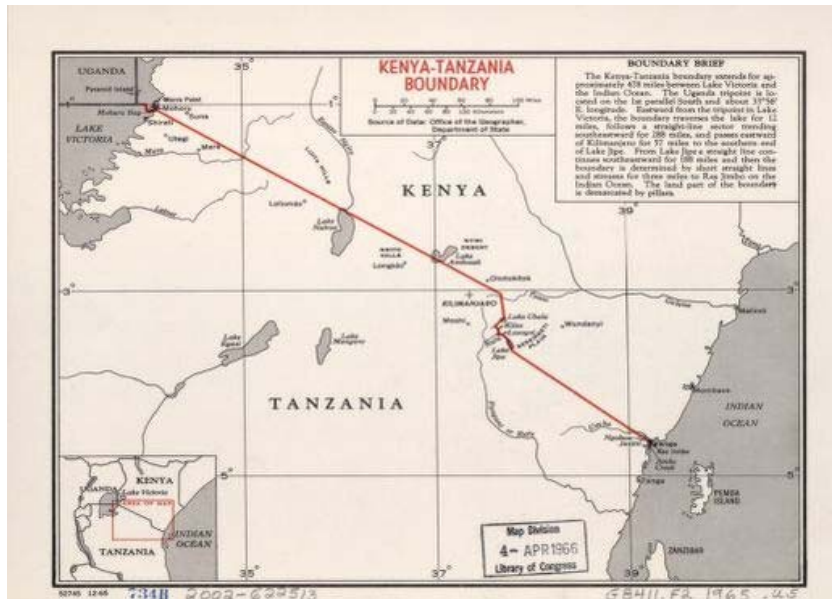


Fig 1:1 Map showing the boundary between Kenya and Tanzania. Source United States. Department of State. Office of the Geographer<sup>2</sup>

As it can be seen in the map above, Tanzania and Kenya are neighboring countries sharing a border that divides the southern part of Kenya's geopolitical territory and the northern part of Tanzania's geopolitical territory. As neighboring states the two countries can have been readily used in compare and contrast studies, this is more so particularly for the Kenya-Tanzania border region, as they share remarkable similarities including: similar climate; natural resource bases; growing populations of subsistence farmers, and similar cultural groupings most significantly the Maasai ethnic group as demonstrated by fig 1:2(Coast, 2002; Tiampati, 2015). The region also has similarities in terms of climatic conditions and socio-economic activities( Tiampati, 2015) as it is shown in the figure 1:3 below; which shows the spatial pattern of biodiversity and protected pastoralists areas across both countries.

<sup>2</sup> <https://www.loc.gov/resource/g8411f.ct003835/?r=-0.615,-0.061,2.23,0.842,0>



Fig 1:2 Map of areas occupied by Maasai ethnic group across southern region of Kenya and northern region of Tanzania. Source BBC<sup>3</sup>

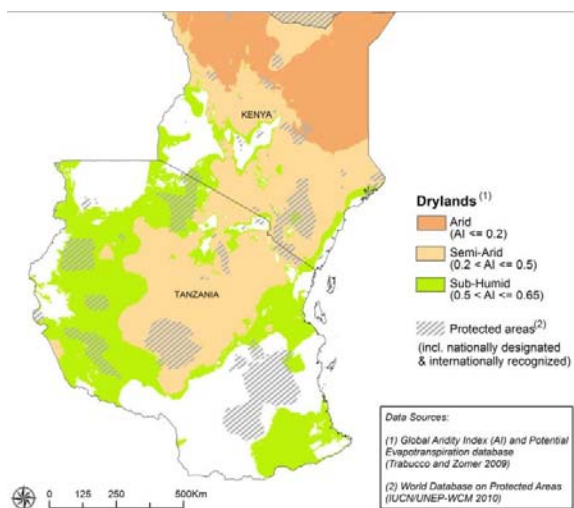


Fig 1:3 Map showing biodiversity and protected pastoralist areas across Kenya and Tanzania. Notice the region around Kenya -Tanzania border have similar climate and biodiversity.<sup>4</sup>

Most relevant to this study is the similarities between their historical and colonial institutional legacies, with both countries being colonized by the British, although Tanzania was first colonized by Germany and only become a protectorate of the British government after World War 2 (Miguel, 2011).

It thus follows that since their independence in the early 1960's Kenya and Tanzania

<sup>3</sup> <https://www.bbc.com/news/magazine-22617001>

<sup>4</sup> <https://link.springer.com/article/10.1186/2041-7136-2-14>

shared similar political administrative structures (Iii, 1997; Obosi et al., 2003). They both had centralized unitary governments, with Central national government and non-autonomous local government. They were both comprised of administrative regions headed by a regional administrator in Tanzania appointed by the president. In Kenya, these administrative regions which were then commonly referred to as provinces were administered by Provincial commissioners who were similarly appointed by the president. In both cases there existed was limited political autonomy (Commonwealth Local Government Forum, 2012, 2018; Iii, 1997; Obosi et al., 2003).



Fig 1:4 On the right Map of Kenya's administrative regions (provinces) until 2013 before decentralization reform, on the left map of Tanzania's administrative regions (regions). Source, nationsonline.org<sup>5</sup>

However, in 2013 as has already been mentioned, Kenya underwent drastic and complete political and institutional decentralization, shifting from the prior highly centralized governance

<sup>5</sup> <https://www.nationsonline.org/oneworld/map/tanzania-administrative-map.htm>

framework to a decentralized one (Gimoi, 2017; Mwenda, 2010). It abolished the former regional and local government system and established county governments with county assemblies. The counties are headed by governors and have county assemblies whose members are directly democratically elected by the citizens, and are considered equal and independent from the central government (Mbate, 2017; Mwenda, 2010). Figure 1:5 below shows the new administrative structure, comprising of county governments in Kenya that were established after the promulgation of the 2010 constitution and came into force after the 2013 elections (Mwenda, 2010).



Fig 1:4 Official map of new Kenyan administrative regions with counties after 2013. Source Kenya Ministry of Lands.<sup>6</sup>

<sup>6</sup> <http://lands.go.ke/wp-content/uploads/2018/11/The-Map-of-Kenya.pdf>

## **Chapter 3: Methodology**

### **Specification and Estimation of the Model**

As mentioned in earlier sections, the main objective of this paper is an attempt at finding out what impact if any the devolution of the Kenyan government had on service delivery in Kenya. In order to achieve this the paper intends to apply Difference in Difference (diff-in-diff from here henceforth) method by taking advantage of the Kenya Tanzania border. The border separates the Southern border region of Kenya and the Northern border region of Tanzania. This provides us with inter-regional (albeit different countries) natural experiment and would as result allow us to compare the trends of service delivery across the two regions.

Based on diff-in-diff's fundamental common trend assumption which deduces that in the absence of any intervention the trend in the control state is what should we should expect to observe in the treatment state( Angrist & Pischke,2015), this paper will presume that if decentralization had not been implemented in Kenya then, the trend of service delivery for the residents in Northern Tanzania border region during the period between 2008 to 2016 should be the same as the trend of service delivery for residents in the Southern border region of Kenya.

Therefore, any deviation from the trend would be assumed to be induced by a causal effect (Angrist & Psichke,2015). That is, any deviation from the trend in service delivery in the Southern border region of Kenya relative to the Northern region of Tanzania can be assumed to

be as a result of the causal effect of decentralization on the region's residents' service delivery.

Moreover, this paper prefers to use diff-in-diff as it allows us to eliminate any existing pretreatment differences between the treatment and control group (Stock & Watsons, 2007). Although, Kenya and Tanzania are both developing countries that border each other, (citation) Kenya has a higher HDI (citation) and thus service delivery for residents in the Southern border region of Kenya may start out ahead of that of the residents in the Northern border region of Tanzania. Nonetheless, despite the pretreatment differences in the means, by generally focusing on the changes in the outcome over the duration of the experiment, the diff-in-diff estimator can eliminate the initial effects of the values of the outcome that cause systematic variation between the treatment and the control group (Stock & Watsons,2007).

Furthermore, diff-in-diff in the context of panel data, as in this study, will allow us to control for observed and non-observed omitted variables. This includes specifically, variables that may vary across the two regions but are constant over time and those that may vary over time but are constant across the two regions (Angrist & Pischke,2015).

As it is known, a simple diff-in-diff calculation involving only the four values comparing the differences of the changes of the pre and post situations of the differences of two regions would not give us estimates which will provide us with their statistical significance of the impact estimated. Therefore, this paper following (Angrist & Pischke,2015)'s model prefers to use a diff-in-diff regression specification with a dummy for the treatment region, Southern border region of

Kenya (treatment), a dummy for post treatment period (Post) and an interaction term(treatment\*Post) dummy that will be a product of the treatment dummy and the post-treatment period dummy.

$$\text{Service delivery}_{st} = \beta_1 + \beta_2 \text{treatment}_{st} + \beta_3 \text{Post}_{st} + \beta_4 \text{treatment}_{st} * \text{Post}_{st} + \mu_{st}$$

The variable *treatment<sub>st</sub>* controls for fixed differences between the two regions being compared, with *treatment<sub>st</sub>* =1 in the case of Southern border region of Kenya and 0 otherwise. *Post<sub>st</sub>* acts a control for the fact that conditions change both for the control and treatment region during the study. Finally, the interaction term *treatment<sub>st</sub>\*Post<sub>st</sub>*, refers to the observations in the treated region in the post treatment period (Angrist & Pischke,2015).

### **Measurements of the Variables:**

The main outcome variable for this study is service delivery and it is measured using the following indicators; access to electricity and access to piped water. These indicators were selected based availability of data.

### **The Data and Data Sources:**

This study uses nationally representative household-level panel data; the FinAccess Household survey data<sup>7</sup> for Kenya and the Demographic and Health survey data<sup>8</sup> for Tanzania. The data used included two pretreatment waves with data collected in 2009 and 2013 and one

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<sup>7</sup> <https://fsdkenya.org/finaccess/>

<sup>8</sup> <https://dhsprogram.com/data/Getting-Started.cfm>

posttreatment wave with data collected in 2015 as demonstrated by the diagram below.

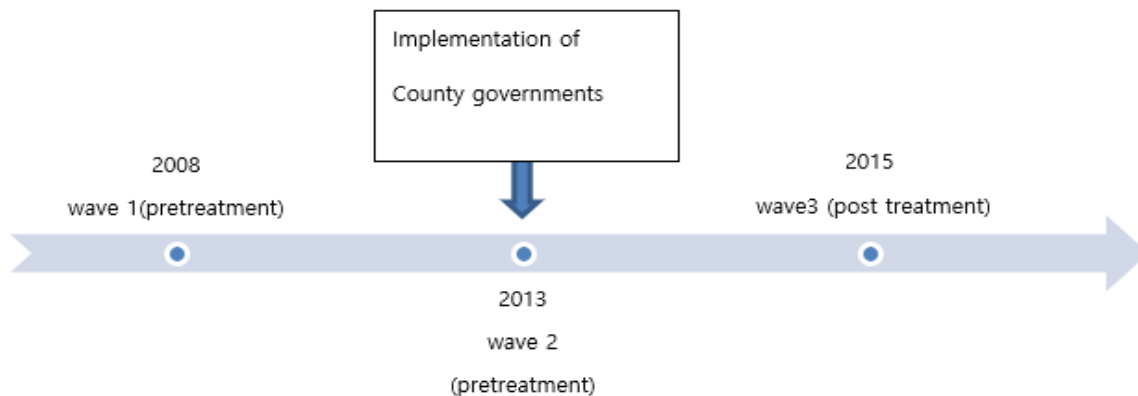


Diagram 1:1 Timeline of data collection pre and post enforcement of county governments in Kenya.

The FinAccess Household survey data is a nationally representative household surveys held in intervals of three to four years and currently has five surveys carried out between 2006 and 2015. Although it is focused on measuring impact of financial services, this paper chose to use it because it included socioeconomic variables that were useful for this paper<sup>7</sup>.

As mentioned above, for Tanzania, the paper used the Demographic and Health Survey (DHS from here henceforth). The DHS is a well-known survey that has conducted more than 300 surveys presently. This paper chose to utilize it as it covered a national scope, had household dataset, and had socio-economic variables relevant to this study<sup>8</sup>.



## **Chapter 4: Results**

### **Impact of Decentralization on Provision of Electricity and Piped water**

Table 1 displays summary statistics of the characteristics of households and those of individual head of households that took part in the study for both the Kenyan region and the control region in Tanzania before decentralization and after decentralization was implemented. Panel A shows the mean and the standard deviation for the household characteristics of the households that took part during the pre-decentralization period in 2013. The total number of households that took part included 6,449 households. For the 2015 post-decentralization wave in Kenya 8,665 households participated and the summary statistics are reported in Panel B.

Panel C reports summary statistics for the households that participated during the 2013 pre-decentralization wave, they were a total of 10,040 households. Lastly Panel D displays the summary statistics of the households in the Tanzanian region that were included during the 2015 post-decentralization wave. They were 12,563 households.

As shown in the table the mean for the number of households with access to piped water for our treatment variable Kenya in 2015 is 0.247 which is higher than that of 2013 0.229. Similarly, the mean for the number of households with electricity in Kenya in 2015 is 0.447 almost twice as much as that of 2013 which is 0.278. Therefore, in order to determine whether this difference is indeed statistically significant, this paper will use diff in diff regression to examine

whether political decentralization did result in an increase in access to electricity and piped water.

Table 1: SUMMARY STATISTICS OF HOUSEHOLD CHARACTERISTICS PRE AND POST-DECENTRALIZATION

	MEAN	SD
<i>Panel A. Pre-decentralization in Kenya</i>		
Number of houses in urban areas	0.641	0.480
Number of people in the household	4.431	2.541
Age of the head of the household	43.62	17.86
Number of households with male head	0.689	0.463
Number of households with educated head	0.800	0.400
Number of households with access to piped water	0.229	0.421
Number of households with electricity	0.278	0.448
<i>Panel B. Post-decentralization in Kenya</i>		
Houses in urban areas	0.440	0.496
Number of people in the household	4.392	2.486
Age of the head of the household	43.87	17.18
Number of households with male head	0.732	0.443
Number of households with educated head	0.783	0.412
Number of households with access to piped water	0.247	0.431
Number of households with electricity	0.447	0.497
<i>Panel C. Pre-decentralization in Tanzania</i>		
Houses in urban areas	0.225	0.418
Number of people in the household	5.380	3.167
Age of the head of the household	46.31	15.68
Number of households with male head	0.761	0.426
Number of households with educated head	0.765	0.424
Number of households with access to piped water	0.287	0.452
Number of households with electricity	0.153	0.360
<i>Panel D. Post-decentralization in Tanzania</i>		
Houses in urban areas	0.289	0.453
Number of people in the household	5.164	3.083
Age of the head of the household	45.77	15.57
Number of households with male head	0.756	0.429
Number of households with educated head	0.792	0.406
Number of households with access to piped water	0.240	0.427
Number of households with electricity	0.224	0.417

Table 2 on page 22 reports the results of the impact of the implementation of county governance framework on provision of electricity and piped water to residents on the Kenyan side

of the border. The impact of decentralization is examined using the different pre and post decentralization periods to see if there is any significant difference in the post-treatment period.

As was mentioned previously in the methodology section, state fixed effects and year fixed effects have been applied to overcome any unobserved time-invariant and state-invariant characteristics. The study factors in controls for individual characteristics; and controls for household characteristics including size of the household, dummy variable for whether the household head has received any level of education or not, dummy variable for the gender of the household head, and household wealth index. The household wealth index consists of 5 dummies from the poorest to the wealthiest. The study additionally controls for regional characteristics using the urban dummy.

Table 2 column (1) and (3) report the raw estimates without covariates with only regional controls. For Column (1) we see statistically significantly positive results for the impact of decentralization on provision of electricity two years after the establishment of county governments. The estimated interaction term implies that the establishment of county governments lead to a statistically significant 0.0984 percentage point increase in the provision of electricity to households on the Kenyan side of the border.

Table 2: ACCESS TO ELECTRICITY AND PIPED WATER

VARIABLES	(1) electricity	(2) electricity	(3) piped water	(4) piped water
treatment	0.125** (0.0624)	0.0718 (0.0790)	-0.0577 (0.0539)	-0.0975 (0.0639)
post	0.0711*** (0.0121)	0.0469*** (0.0108)	-0.0469* (0.0248)	-0.0635** (0.0250)
interaction	0.0984*** (0.0286)	0.147** (0.0576)	0.0647* (0.0351)	0.113** (0.0550)
Constant	0.153*** (0.0342)	-0.214*** (0.0448)	0.287*** (0.0312)	0.0261 (0.0406)
Observations	37,717	29,851	37,717	29,851
R-squared	0.059	0.304	0.002	0.118
Region FE	YES	YES	YES	YES
Community Controls	NO	YES	NO	YES
HH Controls	NO	YES	NO	YES

Note: the outcome variable in all columns are binary indicators (specified in the text). Columns (1), (3) report the raw estimates without covariates. Columns (2), (4) include covariates. HH Controls include: HH size, (dummies); HH education, gender of the HH head, wealth index (5 dummies: from poorest to the wealthiest and Community controls like urban dummy. Standard errors are clustered by regions (77 clusters). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Column (3) similarly reveal positive statistically significant results for the impact of decentralization on provision of piped water. The estimated interaction term indicates that the establishment of county governments lead to a statistically significant increase in supply of piped water to households on the Kenyan side of the border by 0.0647 percentage point.

The outcome variables in column (2) and (4) report estimates including covariates. In these two columns we control for household characteristics including: education of head of household; gender of head of household; size of the household; and the household's wealth index. We also control for urban dummy. The estimated interaction term for column (2), provision of electricity, is not only positive and statistically significant but larger than when we do not control

for household and community variables. The estimated interaction term for column (2) implies that the establishment of county governments resulted in statistically significant increase in the provision of electricity to households on the Kenyan side of the border by 0.147 percentage point.

Column (4) reveals not only positive statistically significant results but an interaction term larger than when we have not controlled for household and community characteristics. The interaction term implies that decentralization resulted in a statistically significant increase in supply of piped water to households on the Kenyan side of the border by 0.113 percentage point.

#### Robustness Check:

Table 3: PROBIT MODEL ESTIMATES

VARIABLES	(1) electricity	(2) piped water	(3) electricity	(4) piped water
treatment	0.436*** (0.0225)	-0.179*** (0.0218)	-0.992*** (0.0375)	-1.044*** (0.0352)
post	0.266*** (0.0197)	-0.144*** (0.0180)	0.211*** (0.0217)	-0.220*** (0.0186)
interaction	0.191*** (0.0291)	0.201*** (0.0290)	0.444*** (0.0398)	0.356*** (0.0381)
urban			-0.776*** (0.0181)	-0.426*** (0.0171)
male			-0.0529*** (0.0204)	-0.164*** (0.0183)
educated			0.510*** (0.00835)	0.290*** (0.00757)
Constant	-1.025*** (0.0152)	-0.562*** (0.0133)	-1.023*** (0.0261)	-0.396*** (0.0234)
Observations	37,717	37,717	30,164	30,164

Note: The probit model for column (1) correctly predicts 73.47% of the values, while that of column (2) correctly predicts 74.75%, that of column (3) correctly predicts 80.32% and the probit model for column (4) correctly predicts 74.42% of the values, the rest of the values are misclassified. Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

In order to conduct a robustness check of the main analysis this paper used probit model displayed in table 3 on page 23. The findings were as can be seen in column 3 and column 4, surprisingly households in the urban areas, with a male individual as the head of the household were less likely to have access to electricity and piped water. Reasons for which could unfortunately not be provided in this paper. However, households where the head of the household were educated, as compared to those whose head were uneducated, were 51% more likely to have access to electricity and 29% more likely to have access to piped water. Nonetheless, households which were in the treatment region after decentralization were 44% more likely to have access to electricity and 35% more likely to have access to piped water.

#### **Falsification Test:**

Since the diff in diff logic is based on the assumption of common trend in that in the absence of treatment, in this case decentralization, the outcome between the access to electricity and piped water in the treated Kenyan region and the control Tanzania should not be different; a falsification test was performed to check if the trend is the same during the pre-treatment period (Angrist & Pischke, 2015). Difference and difference regression was performed using 2 sets of data the first wave collected from the treatment and control region in 2008 and the second wave collected in 2013. Table 4 reports the results from the falsification test. The estimated interaction term in column 1 and 2 are statistically insignificant indicating that the trend observed

in table 2 is not the same in the pretreatment period. Hence, showing that decentralization did in fact result in a significant increase in access to electricity in the treatment region. However, the estimated interaction term in column 3 and 4 are statistically significant thus indicating that the trend in increasing access to piped water was similar even during the pretreatment period and thus decentralization did not lead to an increase in access to piped water.

**Table 4: FALSIFICATION TEST FOR ACCESS TO ELECTRICITY AND PIPED WATER**

VARIABLES	(1) electricity	(2) electricity	(3) Piped water	(4) Piped water
treatment	0.101 (0.0854)	0.0374 (0.0402)	0.00460 (0.0811)	0.0339 (0.0909)
post	0.0289** (0.0139)	0.0251** (0.0100)	-0.0689** (0.0284)	-0.0688** (0.0283)
interaction	0.0238 (0.0529)	0.0253 (0.0315)	0.603*** (0.112)	0.572*** (0.125)
Constant	0.124*** (0.0280)	0.0526*** (0.0172)	0.231*** (0.0375)	0.228*** (0.0484)
Observations	31,584	31,584	31,584	31,584
R-squared	0.023	0.286	0.243	0.245
Region FE	YES	YES	YES	YES
Community Controls	NO	YES	NO	YES
HH Controls	NO	YES	NO	YES

Note: the outcome variable in all columns are binary indicators (specified in the text). Columns (1), (2) report the raw estimates without covariates. Columns (3), (4) include covariates. HH Controls include: HH size: (dummies), gender of the HH head, age of HH head. Community Controls include urban(dummies). Standard errors are clustered by regions (99clusters). Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

#### **Chapter 4: Discussion and Conclusion:**

Despite the increasing attempt at different forms of decentralization around the globe, its effectiveness as a system of governance and administration remains contentious. None the less, in the Kenyan case, our results reveal that political decentralization may not have resulted in the increased access in piped water but did result in improved service delivery in terms of provision of electricity to households in Kenya.

These results support the idea that decentralization can promote service delivery, not only because local leaders are at a better position to understand the needs of the residents as opposed to far removed central government officials, but also since political decentralization allows citizens to hold local leaders accountable during elections. Hence, it can be implied that by providing residents with the ability to play a watchdog role on the government, which is now closer to the people, political decentralization pressurizes subnational governments to be more effective and even promote healthy competition among different subnational governments for better performance.

We can also deduce from the positive results that political decentralization may be a solution for a multiethnic society where elite politicians from majority ethnic groups may marginalize regions occupied by minority groups by not providing them with necessary public services. Although, this paper due to limitation in time and data availability could not examine



whether the positive results were mainly due to the improvement in service delivery in regions that were initially historically marginalized regions, this study finds it plausible to assume that it may have been the case.

Even so, this study is cautious in making this conclusion as these results are only 2 years after the implementation of county governments and cannot predict the trend in the long run.

### **Limitations and Future Research Directions:**

As is the case for most studies on developing countries, this paper's major challenge of limited data which limited the number of variables that could have been included to make it more conclusive.

Future studies on the impact of county government on service delivery could be done over a longer period to see what the long-run effects would be. Additionally, they could investigate the question of what the impact of political decentralization was specifically for historically marginalized regions as compared to those that were not marginalized. It would be interesting to know whether decentralization promoted equal service delivery between wealthy counties and poor counties or instead widened the gap between them in terms of service delivery.

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