



## INTEREST RATE CEILINGS AND FINANCIAL EXCLUSION IN KENYA: EVIDENCE FROM COMMERCIAL BANKS' SECTORAL CREDIT DISTRIBUTION

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### ABSTRACT

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The Finance Act that was amended in November 2019 in Kenya saw the removal of the caps on interest charged on loans. The motive of repeal of interest rate caps was to encourage the commercial banks to offer credit to Micro, Small and Medium Enterprises (MSMEs) and other sectors of the economy. The interest rate caps that were implemented in September 2016 led to a significant reduction in lending to the private sector and in particular the small and medium size enterprises and the rural poor which were financially excluded by commercial banks. The main objective of the study was to find out whether interest rate caps contributed to financial exclusion in Kenya's commercial banks' sectoral credit portfolio. The target population of the study was 11 private sectors that benefit from commercial banks credit in Kenya. Secondary balanced panel monthly data spanning from January 2016 to December 2019 was used in the study. Fixed effects panel data regression model was used to analyze the data. The results from the study showed a positive and statistically significant relationship between interest rate ceiling and financial exclusion implying that interest rate ceilings affects credit access leading to financial exclusion in Kenya. The results for inflation rate indicated a negative but statistically significant relationship between inflation and financial exclusion implying that inflation affects loan credit growth. The results for exchange rate and public debt are statistically insignificant, suggesting that they do not have an effect on credit access in Kenya's commercial banks.

**Contribution/Originality:** This study is one of very few studies which have investigated on the effect of interest rate ceilings on financial exclusion in Kenya by focusing on stock of credit to private sector using fixed effects panel data regression model.

### 1. INTRODUCTION

Financial inclusion has emerged as an important public policy priority for governments and Institutions worldwide. Its relevance stems from the fact that access to legalized financial markets has great potential to better livelihoods, particularly those in conditions of extreme poverty. From an economic point of view, financial inclusion affects economic growth, inequality, and financial stability (Bruhn & Love, 2009).

Multiple barriers to financial services still prevail to date; majority are based on informational costs as well as operational costs. Ultimately, these costs are translated into a set of requirements that impede access to the financial sector, such as the case of loan collateral, high interest rates, and long processes of loan documentation and verification. The leading contributing factor to financial exclusion is the enactment of interest rate ceilings. While market-determined interest rates became predominant in emerging markets after the liberalization of financial

systems in the late 80s (especially Latin American countries), a majority have implemented interest rate caps (Sahay, Cihak, & N'Diaye, 2015).

Internationally, ceilings on interest rates have become more predominant in both developed and developing countries in recent years. In Europe, there has been a vibrant inclination concerning the use of interest rate caps as a policy tool to control high cost of credit. In 2017, 21 out of the 28 European Union member states had interest rate restrictions on loans. Among them were Germany, France and Italy which are the three largest economies in the European Union. In a huge number of scenarios, the restrictions were towards bank lending, which comprised of advanced loans, overdrafts or credit cards. In other scenarios, interest rate ceilings were aimed at micro financial institutions lending such as small micro enterprises loans or household loans. The micro-financial institution lending accounts were the reason for the recent surge in interest rate ceiling as a policy tool in European Union affiliate states. Additional aggressors have been the inversion of the European Union Consumer Credit Directive into national law, as well as public and parliamentary concerns about the damaging effects of particular products on end user well-being (Faherty, McCarthy, & Byrne, 2017).

Numerous countries, particularly the ones in Latin America, carried out trials with different types of interest rate restrictions in the 1980s and 1990s. Nonetheless, there was a decline in the number of states with interest rate ceilings ever since. A majority of countries inflicted interest rate restrictions on credit to guard customers from exploitation and what was viewed as exceptionally high rates of interest, whereas simply a few countries were using interest rate ceilings to sustain significant parts of the economy from being financially excluded (Maimbo & Gallegos, 2014). Paraguay and Bolivia were amongst a small number of countries in Latin American with interest rates caps meant at attaining reasonable supply of credit. Equally, in Asia, a cap of two percent over and above the deposit rate cap was implemented on credit to agriculture sector, Small and Medium Enterprises (SMEs), export-oriented industry and technology. Prior knowledge from numerous nations indicated that restrictions on interest rates, if fixed well below the average market rate, can limit distribution of loans as they hinder appraising of risk by lenders, decrease credibility, and reduce diversity and competition of product (Dam, 2009). This might possibly affect general and sectoral access to credit leading to financial exclusion.

Interest rate restrictions from time to time can force consumers to opt for shylocks which are informal and expensive with little or no protection. Commercial banks would as well be inclined to advance loans more to customers with better risk profiles or higher security. Whereas the expansion in loan size to extremely collateralized sectors may aid in recovering the cost, this may also escalate portfolio or credit risks as banks strive for a narrow base of existing clients. This is due to commercial banks' risk aversion and inadequate information to measure and consider the risks of new borrowers. The discussion meant that financial exclusion can possibly occur as a result of controls on interest rates. The main measures of financial exclusion largely vary from restricted access and usage of banking services to failure to provide cheap financial services to low- income and disadvantaged sectors of the economy. Other indicators also comprise of the number of people using accounts to transact, access of loans, the number of bank accounts, the number of automated teller machines per 100,000 adults, financial products and the number of bank branches (World Bank, 2014). Kenya has witnessed an enormous growth in the number of individuals and businesses having access and using financial services and products' across different sectors preceding the introduction of the interest rate caps in September 2016. A good example is between 2006 and 2019 where the economy had documented over 60 percent growth in the percentage of residents that are financially included particularly those consuming financial services were at 83 percent by 2019 (FSD Kenya, 2019).

In Kenya, suggestions to cap interest rates emerged from time to time over the past two decades. A law on interest rate cap which imposed a ceiling for lending rates at four percent above the Central Bank Rate and a floor on deposits at 70 percent of the Central Bank Rate was implemented in September 2016. At the time of their introduction, Kenya's interest rate controls had affected more than half of all existing loans and deposit (Central Bank of Kenya, 2018). The purpose of setting controls on interest rate was to minimize the cost of

borrowing, increase access to loans, and improve the returns on savings. Nonetheless, the law on interest rate controls has had adverse effect than what was intended. The lending interest rate ceilings led to significant alterations in the lending activities of commercial banks in Kenya. To begin with, the stock of credit to Small and Medium Enterprises (SMEs) reduced by approximately 10 percent between September 2016 and September 2017. Contrary, lending to households and large corporates grew at a rate comparable to the prevailing rate before the caps were introduced. Secondly, the unpaid stock of credit of small sized banks plunged by roughly 5 percent in the 12 months to September 2017 while medium and large tier banks further continued to realize moderate credit growth. The small tier banks were disproportionately hit since the caps because they depended largely on higher-risk higher-return borrowers, such as SMEs borrowers. Thirdly, total loans to the private sector experienced a very slow growth rate of 2 percent as at the end of October 2017 causing a severe decline in actual terms and as a percentage of GDP. On the same hand, lending to the government increased sharply at a growth rate of over 25 percent during the same period, assisting to finance a higher fiscal shortfall. These developments mirrored financial exclusion rather than a crowding out effect, given that T-bill rates remained generally unaffected after the implementation of interest rate caps. Sector wise, the reduction in private credit affected mainly financial services, agriculture and trade. The trade segment which is the among the biggest segment in terms of borrowing and accounts for about a fifth of total credit to the private sector had its stock of credit dropped by around 3 percent (Emre, Benedict, Niko, & Moyà, 2019).

### *1.1. Statement of the Problem*

In November 2019, the Finance Act 2019 was assented into law by the President of Kenya. The Finance Act 2019 repealed section 33B of the Banking Act which is anticipated to improve credit access by the private sector particularly the small and medium enterprises (SME's) as well as eliminate manipulative unregulated lenders and shylocks. The lending interest rate was capped at 14.5 percent; this was fixed so close to the treasury bills rate of government borrowing, which was between 12 to 14 percent on government bonds during the period. The lending rate being very close to the treasury rate implied that commercial banks had little motivation to offer credit to uncertain market sectors of the economy. As an alternative, financial institutions directed their investments to government securities. Capping of interest rates caused shrinkage of credit accessibility and escalated the costs incurred by underprivileged borrowers, triggering some part of the economy to be financially excluded especially in relation to credit access. Further, banks transferred their loan portfolios to more secure business clients in reaction to the interest rate controls excluding consumer and SME lending (Mehnaz & Bilal, 2018).

According to Miller (2013) restrictions on interest rates make it challenging or unbearable for financial institutions to manage their costs, hence driving them out of the market. The rural poor are either left with no access to financial services or a choice to opt for informal credit markets which are very risky and expensive. Caps can further lead to less accountability and transparency about the costs of credit, as commercial banks cope with interest rate ceilings by adding puzzling fees to their services.

The study aimed to bridge the gap in literature by finding out whether interest rate ceiling that was enacted in Kenya in September 2016 contributed to financial exclusion especially limited access of credit by some sectors in the economy.

## **2. LITERATURE REVIEW**

### *2.1. Theoretical Review*

#### *2.1.1. Modern Theory of Interest Rates*

The efficient financial markets theory made a critical case contrary to any control on interest rates determined by the market. Shaw (1973); McKinnon (1973) and Levine (1997) described economic systems in which interest rate limits generate monetary subjugation. The availability of credit funding is inhibited, pushing borrowers into the

informal unregulated market, where financial institutions can extract cartel rentals by imposing high interest rates. Generally, conservative models of monetary systems showed that interest rate controls interfered with risk and return, and diminish inclusive economic growth rates. Further, interest rate controls restrain private lending to borrowers who are perceived to be highly risky such as emerging businesses and the deprived. Consequently, these market segments are under-served or un-served by formal private credit; they tend to rely as an alternative on heavily-subsidized state owned financial institutions. In suppressed financial systems, financial services are usually of poor quality, with their scale often fiscally constrained since government fund subsidized credit schemes to targeted groups. Much of the subsidies end up with non-poor households and the political elites (Mckinnon, 1973).

## 2.2. Empirical Review

### 2.2.1. Interest Rate Ceiling and Financial Exclusion

Numerous studies have been carried out to assess the relationships between interest rate restrictions and financial inclusion but a few empirical studies have been conducted on financial exclusion and interest rate ceilings particularly in Kenya.

Bodenhorn (2007) examined the effects of mandatory caps on interest rates for a bank in New York, USA. The research linked monthly levels of total number of loans, volume of loans, size of loan and maturities of loan with the difference between the market rate of an exchange traded commercial paper and the legally binding interest rate ceiling. There were two main effects of the execution of the interest rate ceiling that were recognized. To begin with, illegitimate lending increased following the establishment of interest rate cap and subsequently, there was a momentous variation in credit portfolio. Further, there was an increase not only in the average loan size offered but also a shortened loan maturity period.

Termin and Voth (2007) studied the response of a British bank to a variation in extortion law in early 18<sup>th</sup> century. They discovered that the exploitative law condensed the maximum chargeable interest rate from 6 percent to 5 percent and in reaction; the bank decides to participate merely in well collateralized transactions. To accomplish this, the bank reduced lending to low quality borrowers. Termin and Voth observed that there appeared to have been major discrimination in lending in favour of the affluent and politically linked leaders. They also documented that the average loan size more than doubled up following the change in usury law. This further prompted the bank to cushion itself by tightening their collateral requirements. Termin and Voth concluded that interest rate restrictions were not public indemnity as alleged by its protagonists but a means of rent mining and had adverse effects on credit distribution particularly to the deprived sectors.

Ellison and Robert (2008) investigated the usage of interest rates controls in a several developed economies with an objective of making inferences for Australia. Amongst the crucial discoveries comprised the fact that; ceiling on interest rates not only reduced the cost of credit, but it led to credit exclusion especially to sectors such as households that could not borrow to sort cash emergencies or diversify their major purchases. In Germany and France, Ellison and Forster further found out that interest rate ceilings lessened the multiplicity of products for marginalised households. In France, lenders used revolving credit to reach the underprivileged households, while in Germany many low-income and very risky borrowers were excluded from credit.

Benmelech and Moskowitz (2010) analyzed the civil economy of caps on interest rates and its repercussions on fiscal and monetary activity across twenty states of America in the 19<sup>th</sup> century. They explored the influence of caps on interest rates on lending activity, economic activity in order to find out if the ceilings served private or public interests. The authors discovered that compulsory interest rate ceilings resulted in major shrinkage in lending volumes in a majority of the sampled states. Interest rate ceilings had significant adverse influence on numerous indicators of economic activity; in view of the agricultural sector, their study noted that smallholdings were sternly wedged by the caps on interest rate. In addition, they concluded that the private sector largely profited from controls on interest rates. Benmelech and Moskowitz further cited that controls on interest rates were

enforced by well-structured and authoritative political elites with a motive of rationing credit of their opponents who had limited access to funds above and beyond bank credit. The political class could sponsor new projects from their amassed earnings or by gaining access to money markets by virtue of their status. The political class benefitted from interest rate controls especially if the limits were to dampen entry from competitors who could not access funding with ease.

Heng (2015) studied monetary laws involving credit quotas and interest rate caps on financial inclusion stability and in Bolivia for the period 2010 to 2015. Heng found out that capping of interest rates hurt marginalised and small borrowers hence undesirably affecting financial inclusion in Bolivia. Following the implementation of the interest rate caps, the average loan size to non-bank institutions improved while the number of non-bank borrowers deteriorated considerably.

Helms and Reille (2004) while studying on caps on interest rate and microfinance discovered that in South Africa, some financial institutions avoided limits by imposing charges on credit life insurance and other services which minimized the transparency of the total cost of credit. Helm and Reille further found out that in members of West African Economic and Monetary Union countries, the imposition of interest rate caps on non-bank credit caused non-banking organisations to pull out from pitiable and very inaccessible zones and to raise the normal loan size to increase efficacy and earnings since the caps on interest rates were excessively low.

Porteous, Collins, and Jeff (2010) examined interest rate policy in various countries. In Armenia, the absence of clearness on exactly how to compute the rate of interest led non-banks and banks to enforce charges like fees and commission, hence, circumventing the limit and decreasing the transparency for consumers. The distribution of credit seemed to diminished, approval of loan requests dropped and prohibited lending increased due to lower caps on interest rates in Japan, In Poland, financial exclusion in terms of reduction in both usage and access to credit and prosperity was a result of interest rate restrictions.

The work of Capera, Murcia., and Estrada. (2011) investigated the nexus between interest rate controls and financial depth and found a negative connection between obstructive interest rates limits and financial depth in 18 countries in Latin America over 1980 to 2008. In Nicaragua, the application of limits on interest rates triggered non-bank institutions to minimize lending provoking a number of such institutions to vacate remote areas because of extremely high operational costs and associated risks. The non-banks also countered by increasing fees and additional charges to substitute their costs as these were not restricted.

Delgado (2004) examined interest rate restrictions on credit in Colombia and established that limits on interest rate harshly affected emerging firms because of their higher operation costs. Delgado also discovered that the relaxing of limits was among the motives behind the rise in the volume of microcredit lending. The implementation of maximum rates of interest in 2004 contributed to a decline in the accrediting of new loaning institutions in Bolivia.

Laeven (2003) analyzed the repercussions of interest rate caps on credit in the United States. Laeven found out that financial liberalization indicators such as the abolition of interest rate caps, positively affected small and micro enterprises' access to funding and detected a relocation of clients to states with less restrictive lending.

Dehejia, Montgomery, and Morduch (2012) cited the case of Brazil in the early 1970s, where caps on loans for short term capital were fixed at 17 percent per annum while inflation rates ranged from 20 to 40 percent per annum. According to Dehejia et al. (2012) in situations where interest rate caps permitted positive real interest rates, rarely were they high enough to allow banks to recover their incurred costs. As an outcome, lending to the underprivileged was a heavily-subsidized activity, dominated by government banks. Many times, the subsidized funds went to the wealthy and political class. The scale of financial services was constrained by the size of government budgets and they also became more substandard in terms of quality.

A review by the Asian Development Bank argued that while lowering interest rates boosts the affordability of microcredit for the deprived; enacting mandatory ceilings on rates will not provide a solution to the root causes of

high interest rates but may further accelerate the situation. The reason behind this is that caps can act as a deterrent to increase operations and consequently lead to a failure in the distribution of loans to Small and Micro Enterprises (SMEs). Interest rate ceilings contributed to a sluggish growth of financial outreach and the financial dependency of SMEs on quotas and subsidies especially in Viet Nam and the People's Republic of China (Fernando, 2006).

The empirical literature tends to be in line with the hypothesis that financial exclusion is contributed by interest rate ceilings which distorted credit distribution procedure and consequently reduced societal prosperity.

The objective of the current research was to find out whether financial exclusion is a result of capping of interest rates in Kenya.

### 3. METHODOLOGY

This study concentrated on sectoral distribution of credit by commercial banks in Kenya. Secondary data is obtained from the Central bank of Kenya, Kenya National Bureau of Statistics and Bank Supervision Reports.

The dataset includes a balanced monthly panel data of 11 sectors spanning from January 2016 to December 2019. Panel data contain cross-section units over multiple years which are advantageous in enlarging the number of observations as well as decreasing collinearity among explanatory variables, particularly if the number of years is limited (Boudriga, Taktak, & Jelloli, 2010).

Fixed effects panel regression model was used in analyzing data over the four year period. The following econometric model was employed for this study;

$$CR_{t,i} = \beta_0 + \beta_1 LR_{t,i} + \beta_2 INF_t + \beta_3 NEXR_t + \beta_4 PD_t + \epsilon_t$$

Where:

$CR_{t,i}$  = Financial exclusion as measured by credit access by private sector i over time t.

$\beta_0$  = Intercept.

$LR_t$  = Interest rate ceiling as measured by commercial bank lending rate over time t.

$INF_t$  = Inflation rate over time t.

$NEXR_t$  = Nominal exchange rate over t.

$PD_t$  = Public debt as measured by changes in public debt over time t.

$\beta_1, \beta_2, \beta_3$  = Beta coefficients.

$\epsilon_t$  = Error term.

### 4. RESULTS AND DISCUSSIONS

Table-1. Tests of between-subjects effects.

Dependent Variable: Credit access						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	13098.736a	4	3274.684	21.451	.000	.141
Intercept	18.610	1	18.610	.122	.727	.000
Lending rate	10863.229	1	10863.229	71.161	.000	.120
Exchange rate	91.116	1	91.116	.597	.440	.001
Inflation rate	1070.896	1	1070.896	7.015	.008	.013
Public debt	24.306	1	24.306	.159	.690	.000
Error	79839.676	523	152.657			
Total	105309.840	528				
Corrected Total	92938.413	527				

Note: a. R Squared = .141 (Adjusted R Squared = .134).

Table 1 of test of between subject effects present the ANOVA results of financial exclusion and interest rate capping interaction effect. The significance value of lending rate and inflation rate are less than 0.05, indicating that they are statistically significant with and F- value of 71.161 and 7.015 respectively.

The partial eta squared statistics reports the real significance of each variable, centered on the ratio of the sum of squares (variation) accounted for by the variable, to the sum of the variation accounted for by the variable and the variation left to error. Partial eta squared of lending rate, exchange rate, inflation rate and public debt showed a smaller amount of variation accounted for by the credit access. Exchange rate and public debt F- values are statistically insignificant and do not have an effect on credit access.

The R squared of 0.141 showed that 14.1 percent of the change in financial exclusion as measured by credit access is collectively explained by lending rate, exchange rate, inflation rate and public debt.

Table-2. Parameter estimates.

Dependent Variable: Credit access							
Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
					Lower Bound	Upper Bound	
Intercept	20.432	58.519	.349	.727	-94.529	135.393	.000
Lending rate	2.515	.298	8.436	.000	1.929	3.101	.120
Exchange rate	-.442	.572	-.773	.440	-1.566	.682	.001
Inflation rate	-.922	.348	-2.649	.008	-1.606	-.238	.013
Public debt	.015	.038	.399	.690	-.059	.089	.000

Table 2 of fixed effects panel regression model results indicated that interest rate ceiling as measured by lending rate have positive and statistically significant relationship with financial exclusion as measured by credit access as depicted by a P- value of 0.000 which is less than 0.05. The results implied that interest rate caps in Kenya's commercial banks contributes to financial exclusion particularly credit access.

Exchange rate results specified a negative and statistically insignificant relationship with credit access as pointed out by a P- value of 0.682 which is greater than 0.05.

The results also showed that inflation rate has a negative but statistically significant relationship with credit access as indicated by a P-value of 0.008 at 5% level of significance. A higher inflation decreases actual returns from any given investment hence limiting the growth of credit in Kenya.

Further, public debt results indicated a positive and statistically insignificant relationship with credit access as depicted by a P- value of 0.690 which is greater than 0.05.

The results support the work of Ellison and Robert (2008) who investigated the usage of interest rates controls in a several developed economies with an objective of making inferences for Australia. Amongst the crucial discoveries comprised the fact that; ceiling on interest rates not only reduced the cost of credit, but it led to credit exclusion especially to sectors such as households that could not borrow to sort cash emergencies or diversify their major purchases. In Germany and France, Ellison and Forster further found out that interest rate ceilings lessened the multiplicity of products for marginalised households. In France, lenders used revolving credit to reach the underprivileged households, while in Germany many low-income and very risky borrowers were excluded from credit.

The findings of this study are also in line with the work of Porteous et al. (2010) who examined interest rate policy in various countries. In Armenia, the absence of clearness on exactly how to compute the rate of interest led non-banks and banks to enforce charges like fees and commission, hence, circumventing the limit and decreasing the transparency for consumers. The distribution of credit seemed to diminished, approval of loan requests dropped and prohibited lending increased due to lower caps on interest rates in Japan, In Poland, financial exclusion in terms of reduction in both usage and access to credit and prosperity was a result of interest rate restrictions.

## 5. CONCLUSION

The study used fixed effects panel data regression analysis to examine whether interest rate ceilings contributed to financial exclusion in Kenya especially credit to private sector. The results from the study exhibited a positive and statistically significant relationship between interest rate cap and credit access inferring that interest rate controls affects credit access leading to financial exclusion in Kenya. The results for inflation rate showed a negative but statistically significant relationship between inflation and financial exclusion implying that inflation affects loan expansion. The results for exchange rate and public debt are statistically insignificant, suggesting that they do not have an effect on credit access in Kenya's commercial banks.

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