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A Meta-Analysis on Solutions to Credit Crunch in Kenya: Lessons from Other Countries

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ABSTRACT

Purpose: The current study, based on the lessons from other countries, seeks to establish the gaps that need to be filled and establish the trends in the solutions to credit crunch. The study therefore seeks to find the best course of action that Kenya can adopt as a solution to credit crunch.

Methodology: The study adopted a desktop literature review method (desk study). This involved an in-depth review of studies related to credit crunch and the solutions adopted drawing evidence from several countries globally and regionally. The research was focused on acquiring theoretical and empirical knowledge/evidence about the solutions to credit crunch. Various databases (Google, Scopus, Science direct, Ebsco, Sage journals, Google scholar, Emerald insight among others) were sought and filtration done based on the key words of the study. The main Key words were '*Credit crunch*' and '*Solutions/interventions to credit crunch'*. After an in-depth search into the top key words, the researcher arrived at 23 articles that were suitable for analysis. Analysis was done using Excel where the study presented the findings in form of figure and Tables.

Results: In a credit crisis, actions by central banks via public liquidity injections to banks may not reach the real side of the economy if banks do not have enough capital, prefer to hoard liquidity or to invest in safer assets such as government debt. The study likewise finds that lowering of interest rates and well as fiscal policies are good measures to be adopted by the governments in order to cushion the economy from the breakdown. However the study discourages the raising of the prices that is the interest rates since them discourage investors and thus plunge the economy deeper into the credit crunch. Direct injection of money into the economy was noted as a way to heal chronic failures in the market especially when the money supply is very low and the banks fail due to limited assets.

Unique contribution to theory, practice and policy: The study concludes that the Kenyan government and the Central Bank of Kenya needs to strengthen its fiscal and monetary policies and instruments in order to manage its economy and safeguard it against credit crisis. Thus, the involvement of the government in the affairs of the economy is very Key but the government needs to proceed with caution since the economy is a free market. Since increase in interest rates were found to negatively impact on credit crunch by constricting liquidity, the government need to address the interest rate capping since in the long run it is not a solution to inflation as well as credit crisis.

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1.1 INTRODUCTION

Also referred to as a credit squeeze/ credit tightening or credit crisis, a credit crunch is a sudden decrease in the general availability of credit (or loans). That is a time during which the amount of money that banks and other borrowers have at their disposal to borrow is unexpectedly limited (Mizen, 2008; Padayachee, 2016). A credit crunch usually involves a sharp decline in credit supply irrespective of an increase in official interest rates. The correlation between the availability of credit and interest rates thus, shifts in such cases and credit shrinks to an extent that it becomes less available at any official interest rate or a direct relationship between interest rates and available credit (known as credit rationing) ceases to exist. A credit crunch is often followed by a shift of lenders (usually the banks and other financial institutions) and investors to a more valuable environment in search for less risky investments (often at the cost of small to medium-sized enterprises) (Arieff, Weiss & Jones, 2010).

Credit risk can occur as a result of sudden increase in interest rates for example in 1992, UK government increased rates to 15%. Likewise, the credit crunch of 2007-08 was driven by a sharp rise in defaults on sub-prime mortgages due to increase interest rates because of inflation. This made mortgage payments more expensive. These mortgages were mainly in America but the resulting shortage of funds spread throughout the rest of the world including the UK (Muradoglu, 2010). Price caps has also been proven to increase the level of interest rates resulting in credit crunch. In an analysis of payday loans in Colorado, the introduction of a price ceiling was initially seen to lower interest rates but in the long run it was found increase gradually towards the interest rate cap. This was clarified by tacit collusion, whereby the price cap provided a focal point so that borrowers understood the scale of price rises would be restricted and therefore collusive conduct would have a limited natural result (Bianchetti & Carlicchi, 2011; Marco & Mattia, 2012; Cuesta, 2019).

Moreover, interest rate ceilings can often drive borrowers back to more expensive informal markets where they generally have no or little protection. Financial institutions would also tend to lend more (increase loan size) to clients with higher collateral or generally better risk profiles. And when the definition of interest rate in the capping law is not clear, financial entities may have scope to charge fees and commissions (Marco & Mattia, 2012). When the interest rate ceiling is too low, this can reduce bank's profitability, lowering the expansion capacity of the financial sector and thus limiting financial development. While the increase in loan size to highly collateralized segments can help recover the cost, this can increase concentration risks as banks compete for a narrow base of existing customers. This is because of banks' risk aversion and limited information to assess and take on risks of new borrowers (Ochenge, 2018).

International experience from countries such as Armenia, Nicaragua, and South Africa as a result of interest rate caps points to a number of consequences, including: reduction in credit flows as a result of withdrawal of financial services from the poor and those perceived to be highly risky segments, an increase in illegal or informal lending, an increase in the total costs of the loan through additional fees and commissions and a decrease in product diversity (Maimbo & Gallegos, 2014). Germany, Japan, the U.K. and the U.S. tried to respond to the crisis during the '*great depression*' by raising interest rates in 1931-2 in a perverse attempt to defend their currencies,

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however, it worsened the crisis. Banks failed and as such, it reduced the money supply because there was less credit available (Saint-Etienne, 2013; Frank, 1981). Agao (2014) echoes these findings by showing that interest rates have the most significant effect on mortgage uptake compared to other macroeconomic variables such as GDP and level of money supply.

In the United States and the UK, the Fed and the Bank of England respectively began aggressively to lower interest rates in January 2008 and by the year's end the US had adopted a zero-rate policy. Quantitative easing was used on a massive scale during 2008 through to early 2010 and, as a result, the money supply rose dramatically. In both countries, monetary and fiscal policies were pursued on a scale that would have been unacceptable during the 1930s but, crucially, these bold initiatives prevented financial meltdown (Crafts & Fearon, 2010). Umuro (2017) show the level of interest has a significant and negative relationship with the uptake of loans.

1.2 Statement of the problem

The main debate against solving credit crisis has been against interest rate capping since it has been seen as example of credit crunch since it distorts the market and prohibits financial companies from offering credit services to those at the bottom of the market who have no alternative access to credit. This runs counter to the current financial development agenda in many poor countries. The debate can be boiled down to the prioritisation of cost of credit over access to credit (Miller, 2013). Conceptually, the effects of interest rate caps are ambiguous and depend on a trade-off between consumer protection from banks' market power and reductions in credit access. Direct money controls by the government (rarely used by Western Governments these days) has likewise been linked to the problem as well as a drying up of funds in the capital markets (Jiménez, Peydró, Repullo & Saurina Salas, 2018).

The amended law capping interest rates in Kenya {the Banking (Amendment) Act, 2016} came into force in on September 14, 2016 setting bounds on lending and deposit rates. It set the maximum lending rate at no more than 4% above the Central Bank base rate; and the minimum interest rate granted on a deposit held in interest earning accounts with commercial banks to at least seventy per cent of the same rate (CBK, 2018). Before the introduction of capping, the Central Bank Rate (CBR) was increased by the CBK to a staggering 18% from 7% since 2011. This was an effort that the CBK was trying to counter the effect of inflation to stabilize the shilling. In the process it forced commercial banks and other financial institutions to increase their lending rates to around 25% which was way too big a margin from the previous 11%. The cost of mortgages and credit was very high. Owing to the introduction of interest rate capping, there has been an increased demand for credit including mortgage loans due to perceived affordability and appetite for loans by customers. Commercial banks have on the other hand introduced tighter credit standards so the actual loan disbursements have been lower than the increased demand. Most commercial banks have also shown preference to offer short term loans as compared to long tenure mortgage loans. Commercial banks with sufficient liquidity to fund long-term facilities are now focusing more on secured facilities like mortgage loans (CBK, 2017). This proves that the applicability of interest rate capping has not proved effective in Kenya. Thus the current study seeks to analyze the trends in solutions used by other countries in response to credit crunch.

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2.0 LITERATURE REVIEW

Girardi, Ventura and Margani (2018), show a negative effect of credit crunch on GDP growth and (relative) credit availability for the manufacturing sector. Rising interest rates or a worsening of the quality of banking balance sheets tend to increase the likelihood of experimenting a credit squeeze. The empirical evidence shows that credit crunch episodes are less likely to occur during periods of sustained economic growth, or when credit availability for the manufacturing sector is relatively abundant. In contrast, a tight monetary policy stance or a worsening of the quality of banking balance sheets tend to increase the likelihood of experiencing a credit squeeze.

According to Mizen (2008), Subprime (high-risk mortgages) was the trigger for the Credit Crunch in USA since 1995- 2005. The effects of the subprime mortgage defaults created a reappraisal of the hazards of all types of risky assets. The first effect was seen in capital markets. Central banks provided funding liquidity for distressed institutions and market liquidity. The actions of the Fed, the Bank of England, and the European Central Bank (ECB) in the 2007-08 crisis, were initially different, but there was convergence as the crisis evolved. The ECB also acted quickly to stem the crisis by moving forward auctions for liquidity by injecting €94.8 billion, with more operations totalling €108.7 billion in the following weeks, to *frontload* the liquidity operations into the first part of the maintenance period (Mizen, 2008). Innovativeness in issuance of direct liquidity through term lending where markets needed liquidity at maturities longer than overnight was offered as a solution.

Owing to the lessons from the crisis of 1929, the first action was to provide liquidity that is the UK Government to restore confidence was to facilitate interbank lending when overnight rates jumped from 3 per cent to a record high 6.5 per cent in October 2008. The second action was for government to restore banks' balance sheets. This can be done in two ways; either by leaving the assets on the balance sheets of the institutions and providing a floor to their values or through the government taking-over the assets altogether. The latter leads, of course, to transfer pricing issues. The UK Government opted for buying the assets of the banks in exchange for shares. The third action was for the government to restore consumer demand and output. The immediate reaction of the Bank of England to provide liquidity and restore confidence was to reduce interest rates (Muradoglu, 2010).

Cuesta and Sepulveda (2018), using comprehensive individual-level administrative data, underscored that the policy decreased transacted interest rates by 9%, but also reduced the number of loans by 19%. Chile's consumer surplus was found to decrease by an equivalent of 3.5% of average income, with larger losses for risky borrowers. Survey evidence suggests these welfare effects may be driven by decreased consumption smoothing and increased financial distress. Interest rate caps, therefore, provide greater consumer protection in more concentrated markets, but welfare effects are negative even under a monopoly. Risk-based regulation reduces the adverse effects of interest rate caps, but does not eliminate them.

A randomised experiment in Sri Lanka found the average real return to capital for microenterprises to be 5.7% per month, well above the typical interest rate of between 2-3% that was provided by MFIs (Miller, 2013). Similarly, the same authors found in Mexico that returns to capital were an

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estimated 20-33% per month, up to five times higher than market interest rates (McKenzie & Woodruff, 2008).

As per the evidence from Peydró (2018), in April 2010, the Spanish government announced that its state-owned bank, Instituto de Crédito Oficial (ICO), would set up a new credit facility to directly lend to small and medium-sized enterprises (SMEs) and entrepreneurs. Credit conditions by privately-owned banks had substantially tightened, so the idea was to fill this gap. Thus, the solution was that ICO would lend directly to SMEs, assuming all the credit risk of these loans (ICO was basically lending before to strategic sectors, mainly large exporting firms). However, a significant part of its lending is very risky, with most defaults stemming from unobserved borrower risk, so the effectiveness of this policy in combating credit crunches is reduced by informational asymmetries in crisis times.

Direct public lending via state-owned banks might therefore have a useful role to play during financial crises by ameliorating the credit crunch (Allen, 2011; World Bank, 2013). A state-owned bank can support lending to the real economy by relying not only on its explicit capital, but also on the implicit capital derived from its access to taxpayer funds. The expansion of the supply of credit during a crisis may bring positive spill-overs for the real economy (Holmstrom & Tirole, 1997). However, such countercyclical lending may be associated with large defaults (the decision by the government to stop repaying part or all of its debt) due to a general scarcity of creditworthy borrowers (Peydró, 2018).

China has sustained a global beating pace of economic growth before, during, and since the global financial and economic crisis. Since 2004 the inflation-adjusted return on a one-year deposit in Chinese banks averaged –0.5%. This was a sharp discontinuity with the late 1990s and the first part of the previous decade, when the real return on the same deposit averaged 3.0 percent. After February 2002, the renminbi depreciated along with the U.S. dollar but the subsequent pace of appreciation was barely sufficient to offset this depreciation. To keep inflation under control, the central bank had to engage in massive sterilization operations, first selling off its entire holdings of government debt and then issuing massive quantities of central bank bills, with bills outstanding by year-end 2010 standing at roughly 4 trillion renminbi, or 10 percent of GDP. The central bank also raised the required reserve ratio to 21.5% by the first quarter of 2011, forcing the banks to place an additional 12.5 trillion renminbi on deposit at the central bank, thus limiting banks' ability to lend. To hold down the cost of these sterilization operations, the central bank paid extremely low interest on required reserves and only slightly more favourable rates on central bank bills. Thus, sterilization operations constituted a massive tax on banks (Lardy, 2011).

The 2008-09 global financial shock was likewise felt in South Africa. The country's GDP growth rate dropped to 1.8 percent in the last quarter of 2008, then plunged to -6.4% in the first quarter of 2009, and to -3.2% in the second quarter. So the country fell into a technical recession already at the end of the first quarter of 2009. The South African Reserve Bank's responded, within the limits of its current constitutional mandate, by using moral suasion to get the banks to tighten their lending criteria, while letting credit to flow. Further improving banking regulation and supervision, while avoiding the dangers of over-regulation. The South African Reserve Bank likewise

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successively lowered gradually the repo rate (so influencing onward lending rates (Padayachee, 2016).

From 1989 to 1991, the German government deliberately relied on borrowing to take up almost the whole of unification's fiscal brunt. The sharp rise in deficit spending in 1990-91 was one aspect of fiscal policy that was both inevitable and not inconsistent with economic theory (Heilemann & Rappen, 1997). The fiscal boost helped to stabilize non-inflationary domestic demand growth in Germany at a time when other countries were experiencing a recession. However, a key fiscal mistake occurred when an ill-timed and overly ambitious consolidation crusade by the government began in 1992. Moreover, the long run of tight money orchestrated by the Bundesbank between 1990 and 1995 magnified the counterproductive effects of fiscal policy. At the most critical stage, the Bundesbank's argument that fiscal consolidation would prevent inflation did not hold, and measures undertaken to cut borrowing actually pushed inflation higher. The period from 1993 to 1999 stands out by far as Germany's worst economic performance on record. The stark consequences of high unemployment, slow growth, and fiscal deterioration, however, were anything but inevitable (Bibow, 2001).

India was one of the foremost suppliers of raw materials during the First World War. India provided large quantities of iron, steel and other material for the manufacture of arms and armaments. Manufacturing units were gradually established and for the first time, the British Raj adopted a policy of industrialization. At the onset of the Great Depression, as it had been always, much of India's imports were from the United Kingdom. India suffered badly with the price declining from late 1929 to October 1931 (36% compared to 27% in the United Kingdom and 26% in the United States). In such a condition, the most recommended course of action was the devaluation of currency (a strategy that was taken by Australia, New Zealand, Brazil and Denmark). However, the British Raj rejected the idea and recommended increase in mobility of cash through rise in government expenditure. However, this plan failed and thus due to a decline in exports and imports, and thereby, in the transportation of goods, the railway revenues decreased exponentially (Manikumar, 2003).

While the global financial bleeding continued, its effects were felt even to the African Countries. The 111th Congress has monitored the impact of the global economic crisis worldwide. The Supplemental Appropriations Act, 2009 (P.L. 111-32), provided $255.6 million for assistance to vulnerable populations in developing countries affected by the crisis. While an initial House report indicated several countries, including five in Africa, should receive priority consideration, the subsequent conference report did not specify recipients. In August 2009, the Obama Administration notified Congress that four African countries (Ghana, Liberia, Tanzania, and Zambia) would benefit from the funds appropriated in the supplemental. More broadly, U.S. policy responses to the impact of the crisis overseas have focused on supporting the policies of multilateral organizations, including the IMF, the World Bank, and the African Development Bank (AfDB). These organizations have increased their lending commitments and created new facilities to help mitigate the impact of the global crisis on emerging market and developing countries worldwide (Arieff, 2010).

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Credit crisis hit Nigeria and because of the country's dependence on the export sector, Nigeria's exports which are up to 58.4% were US bound and up to 25% to the Euro zone in 2007 were adversely shaken. The stock of Nigeria foreign reserves was kept in European financial markets which tumbled and banks distressed. All the capital market operators reduced fees by 50% where the NSE reviewed trading rules and regulations. The Central Bank of Nigeria reduced MPR from 10.25% to 9.75%, reduced Cash Reserve Requirement (CRR) from 4.0% to 2.0%, reduced liquidity ratio from 40.0% to 30.0%, extended lending facilities to banks up to 360 days, introduced expanded discount window facility, stopped liquidity mopping-up since September 2008 and introduced a financial bailout for troubled banks (Ajao, & Festus, 2011).

Prior to the crisis, Malaysia had been dubbed as one of the miracle economies in East Asia owing to its maintenance of high growth rates averaging 8.9 per cent during the period 1988–96 in addition to low inflation rate of about 3–4% per year. The crash in the Malaysian economy and for the first time in years, the external value of Malaysia's currency, the ringgit, shrank by nearly 50% while the stock market contracted by even more at about 60%n (Rasiah, 1998). Recovery efforts in Malaysia have essentially been home-grown, with the easing of fiscal and monetary policies, as well as the lowering of the cost of capital to revitalize the economy. In terms of fiscal policy, the adjustments called for an 18% reduction in government expenditure as well as the postponement of several infrastructure mega-projects such as the Bakun dam, the Express Rail Link, and the land bridge to Thailand. Policies to strengthen the country's balance-of-payments account were pursued. For example, exports were encouraged (tax incentives to boost the manufacturing, Agriculture, etc.) and imports were discouraged (increase in import taxes) (Ariff & Abubakar, 1999).

The eruption of the debt crisis in 1982 was triggered by a sharp decline in international reserves forces the Mexican government to devaluate the peso, increasing the dollar-denominated debt burden, mainly to US commercial banks. Despite the devaluation of the peso, Mexico is unable to stop its loss of reserves and runs out of cash. International reserves are only sufficient to cover three weeks' of imports. In August 1982, Mexico received USD 3.5bn from western central banks, at the behest of the US government and Federal Reserve Chairman Paul Volcker to relieve immediate cash needs, but only a 90-day rollover of the principal (Goldman, 1982).

In December 1982, the IMF approved a USD 3.8bn loan to the Mexican government. However, Mexico was not able to service its external debt obligations, marking the start of the debt crisis (Buffie & Krause, 1989). In December 1982, Mexico started far-reaching structural reforms, which were a condition for receiving the IMF loan. The reforms included: fiscal austerity, privatization of state-owned companies, reductions in trade barriers, industrial deregulation, and foreign investment liberalization. Owing to rigidly enforced fiscal discipline, the budget deficit halved from 17.6% in 1982 to 8.9% in 1983. Fiscal austerity was accompanied by stringent monetary policy. With an extensive trade reform, Mexico opened up the economy (Federal Deposit Insurance Corporation, 1997; Pastor Jr, 1989).

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3.0 METHODOLOGY

The study adopted a desktop literature review method (desk study). This involved an in-depth review of studies related to credit crunch and the solutions adopted drawing evidence from several countries globally and regionally. Literature research was focused on acquiring theoretical and empirical knowledge/evidence about the solutions to credit crunch. Various databases (Google, Scopus, Science direct, Ebsco, Sage journals, Google scholar, Emerald insight among others) were sought and filtration done based on the key words of the study. The main Key words were '*Credit crunch*' and '*Solutions/interventions to credit crunch'*. The search was done stepwise with the study focusing on the Period of Crisis, the country or the Geographical location, Research Findings/solutions and finally establishing the trends in the solutions used.

3.1 Identification and Searching process

Three sorting stages were implemented on the subject under study that is '*Credit crunch*' and '*Solutions/interventions to credit crunch'* in order to determine the viability of the subject for research. The first Search was done generally by searching the article title, Abstract, Keywords etc. in the renowned journals. The search was further narrowed down to the available publications on the subjects '*Credit crunch*' and '*Solutions/interventions to credit crunch'*. A total of studies that were studied totalled to one thousand two hundred and forty one (1241) and three hundred and eighteen (318) articles. Google scholar was used to check whether the articles were indexed and relevant articles.

Table 1: Steps in searching

	First Search -Overall search in Article title, Abstract, Keywords		Second Search -Full available & accessible publications (Journals)	
Data base	**Credit crunch**	**Solutions to credit crunch**	**Credit crunch**	**Solutions to credit crunch**
Scopus	2,016	N/A	4	N/A

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Science direct	1,048	2,510	N/A	N/A
Ebsco	1,603	5	643	1
Sage journals	1,987	1147	576	310
Google	73,400,000	7,880,000	N/A	N/A
Emerald insight	1,000		18	7
Total	73407654	7883662	**1241**	**318**

Source: (Survey Data gathered on 25th October, 2019).

3.2 Filtration Process

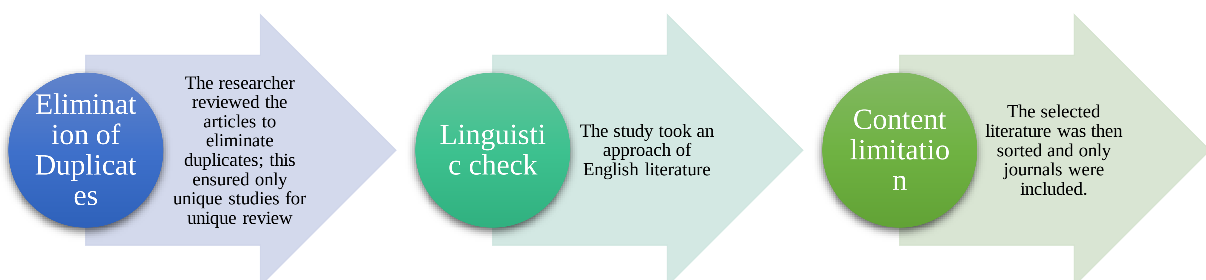

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Figure 1: Filtration process

Source: (Survey Data gathered on 25th October, 2019).

The next step involved checking the accuracy and the relevance of the articles with regard to the study objectives. The researcher reviewed the articles to eliminate duplicates; this ensured only unique studies for unique review in various countries and geographical contexts (duplication was not based on the geography rather it was based on the content and the year of the credit crunch). The study took an approach of English literature since it is a common and internationally accepted language.

3.3 Selection Process

After the filtration was done, the third step involved the selection of fully accessible publications. Reduction of the literature to only fully accessible publications yielded specificity and allowed the researcher to focus on the articles that related to credit crunch. This gave rise to other factors that came into play for instance the interest rate capping, monetary and fiscal policies, government regulation etc. The presentation in Table 2 shows how the key words of the research.

Table 2: Top Key words

Key words	Number of Articles
Credit crunch	8
debt crisis	1
financial crisis	2
Financial Crisis.	2
Global economic crisis	1
Global economic recession	1
Global Financial Crisis	2
Global Financial Meltdown	1

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Great Depression	2
Interest rate caps	2
world economic crisis	1
Grand Total	**23**

Source: (Survey Data gathered on 25th October, 2019).

After an in-depth search into the top key words, the researcher arrived at 23 articles that were suitable for analysis. Analysis was done using Excel where the study presented the findings in form of figure and Tables.

4.0 RESEARCH GAPS

4.1 What makes the research on credit crunch promising

4.1.1 Geographical Location

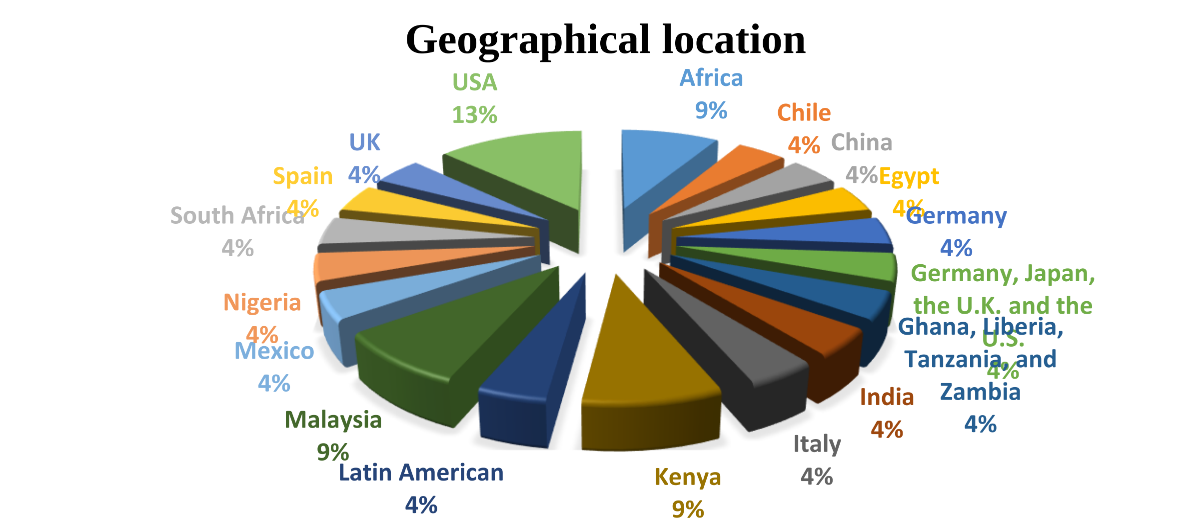

Figure 2: Trend in credit crunch by Geographical Location

Source: (Survey Data gathered on 25th October, 2019).

The findings indicate that most of the studies (13%) were carried out in USA, while 4% were conducted in Germany, UK, Mexico, Spain and China. Furthermore, 9% of the studies have been done in African contexts with 4% form Egypt, Ghana, Nigeria, Liberia, Tanzania, South Africa, and Zambia. 9% of the studies carried out were from Kenya as well as from Malaysia. This is an

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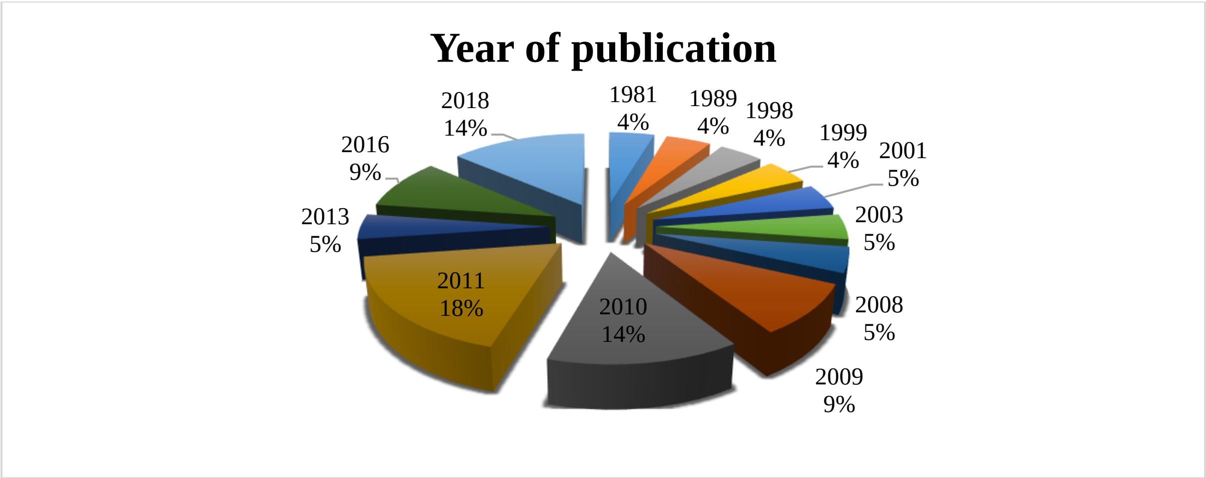
indication of the evidence that the researcher sought regarding the subject under review (credit crunch).

4.1.2 Total Publications by Year

A survey was likewise carried out on the basis of the year the articles researched on were published.



Source: (Survey Data gathered on 25th October, 2019).

Figure 3: Trend in credit crunch by the year of publication

The results indicate that Most of the studies (18%) were conducted in the year 2011, 14% in the year 2010 and 2018 while 9% of them were conducted in the year 2016 and 2009. This is a reflection of the need that arose as a result of the financial meltdown that hit many nations in the year 2008 which originated from the USA. There is thus a need to advance further in knowledge regarding the solutions to financial crisis.

4.1.3 Period of Crisis

The survey likewise based on the year the period the crisis happened was undertaken and the findings presented below:

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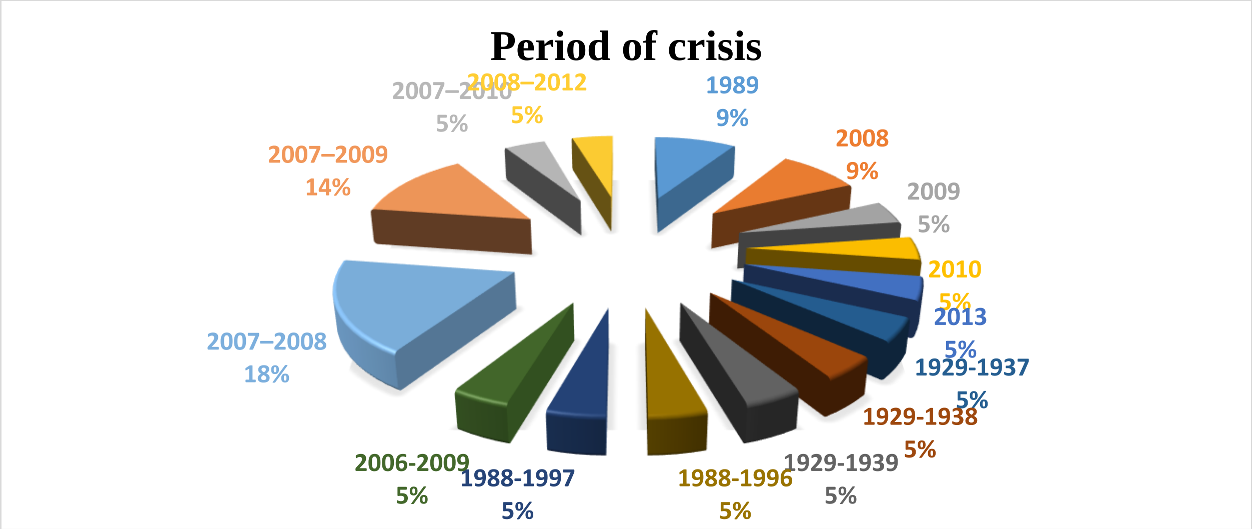

Figure 4: Trend in credit crunch by the period of credit crisis

Source: (Survey Data gathered on 25th October, 2019).

From the figure above, the results indicate that majority of the studies (71%) were carried out between the years 2007 and 2013. It can thus be deduced that many studies were carried out during the period of the 2007-08 financial breakdown with 18% of them between the year 2007 and 2008 while 14% of them between 2007 and 2009. This is a n indication of the magnitude of the credit crunch that struck in the year 2007. As such it called upon countries to come up with strategies to safeguard their economies. This therefore, trickles down to Kenya and thus leaving a gap that needs to be filled by seeking the best measures to address such an impact.

4.2 Solutions to Credit Crunch

The study sought to find out the measures and solutions the various surveyed countries took to solve the credit crunch problems and restore their economies. This section discusses the solutions used.

4.2.1 Government regulation

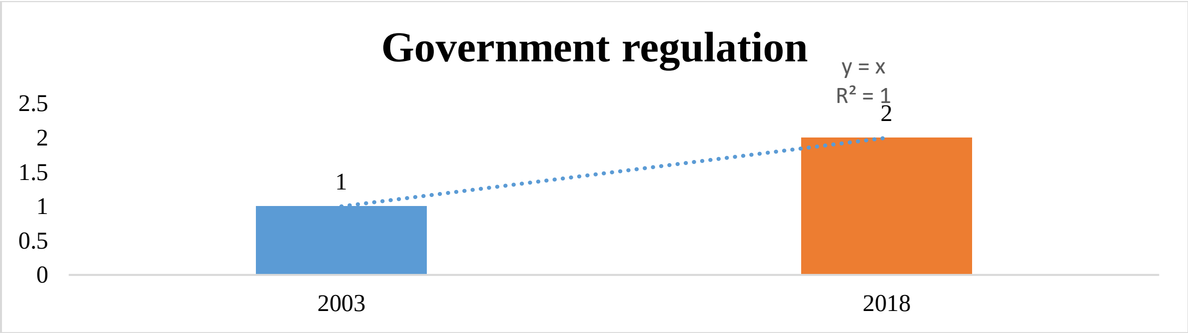

Figure 5: Government regulation

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Source: (Survey Data gathered on 25th October, 2019).

The study indicated that the solution to incorporate government regulation in order to mitigate the problems was evident in the year 2003 and 2018. With only three studies among the surveyed ones acknowledging the interventions of the government into the economy. The trend line of the figure indicates that the adoption /intervention of governments in the situations has been on the rise. This is an indication that at such time banks are usually unable to solve the issues on their own and as such the government needs to intervene in order to settle the dust.

According to Cuesta and Sepulveda (2018), Chile's consumer surplus was found to decrease by an equivalent of 3.5% of average income, with larger losses for risky borrowers. However the government introduced a government policy on the rate of interest to be charged by banks (Interest rate caps) to provide greater consumer protection in more concentrated markets, but welfare effects in the long run are negative. This is why not many countries seek to pursue this direction since risk-based regulation reduces the adverse effects of interest rate caps, but does not eliminate them.

4.2.2 Money Injection

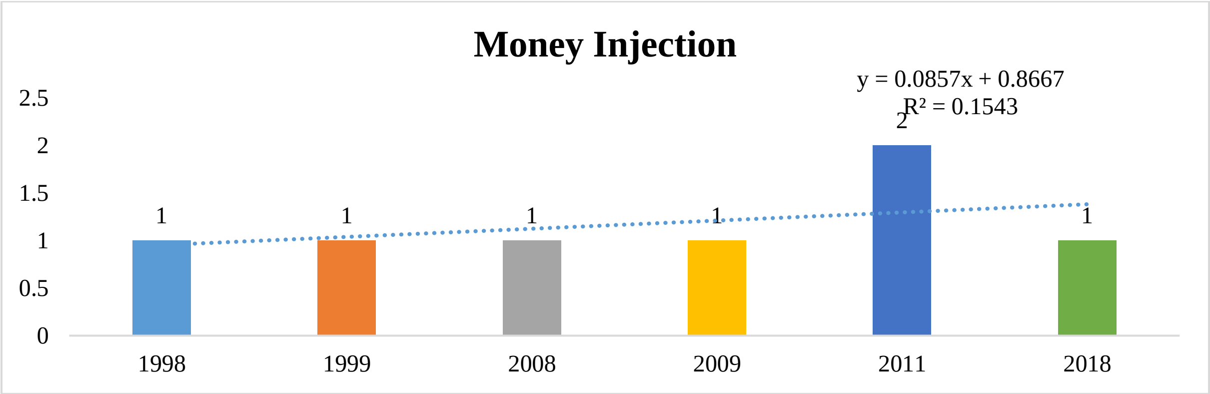

Figure 6: Money Injection

Source: (Survey Data gathered on 25th October, 2019).

The study found that among the 23 surveyed studies, seven of them (30.4%) highlighted that the interventions pursued by the government was to inject money into the economy. The survey likewise noted that there was an increasing trend in the use of the techniques since the year 1998 to 2018 (indicated by a slope of 0.0857). For instance, due to the high impact of the credit meltdown, and bank failures due to limited money supply in the market, the Fed, the Bank of England, and the European Central Bank (ECB) in the 2007-08 crisis intervened by €94.8 billion, with more operations totalling €108.7 billion in the following weeks, to *frontload* the liquidity operations into the first part of the maintenance period (Mizen, 2008).

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4.2.3 Liquidity provision

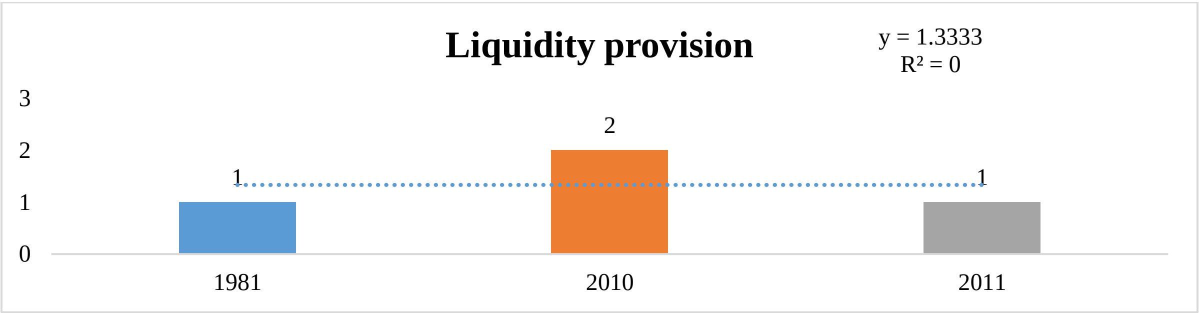

Figure 7: Liquidity provision

Source: (Survey Data gathered on 25th October, 2019).

Based on the provision of liquidity to banks, it was shown that only 17.4% (4) of the studies noted that countries used the technique to cushion their economies in seasons of recession. This is evidenced by the study done in UK owing to the lessons from the crisis of 1929. The third action was for the government to restore consumer demand and output. The immediate reaction of the Bank of England to provide liquidity and restore confidence was to reduce interest rates (Muradoglu, 2010). This with the combined strategies by the UK government helped reduce the impact of the crisis.

4.2.4 Lowering of interest rates

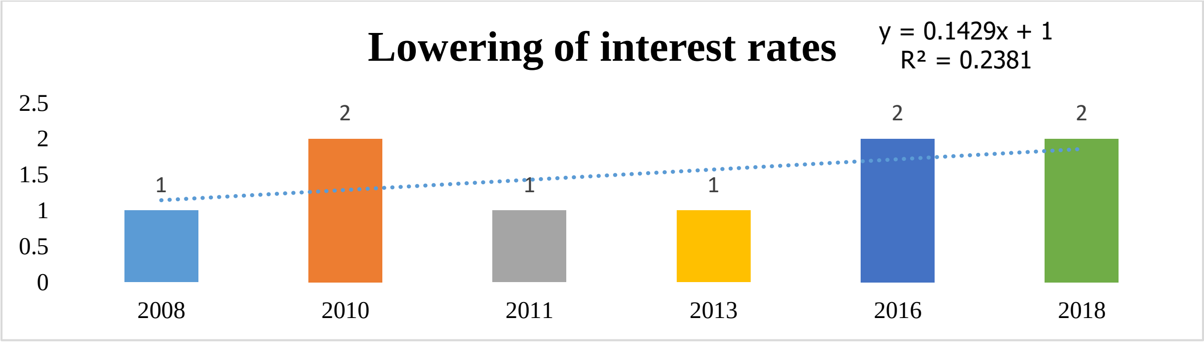

Figure 8: Lowering of interest rates

Source: (Survey Data gathered on 25th October, 2019).

The findings indicate that the strategy to lower interest rates was evident in 9 of the studies (39.13%) surveyed. This is an indication that the prices are a determinant of the aspect that escalates the levels of inflation. This was supported by an increase trend line which indicated an upward slope since the year 2008 to 2018. For instance as indicated by Girardi, Ventura and Margani (2018), the effect of rising interest rates results in a negative effect of credit crunch on GDP growth and (relative) credit availability for the manufacturing sector. Thus in UK, during the period of the great depression, the Bank of England intervened to provide liquidity and restore confidence was to reduce interest rates (Muradoglu, 2010). The same case happened in China in

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order to sustain the economy and to keep inflation under control. The central bank paid extremely low interest on required reserves and only slightly more favourable rates on central bank bills in order to hold down the cost of these sterilization operations. Thus, sterilization operations constituted a massive tax on banks (Lardy, 2011).

4.2.5 Short-term lending and buying or selling government securities

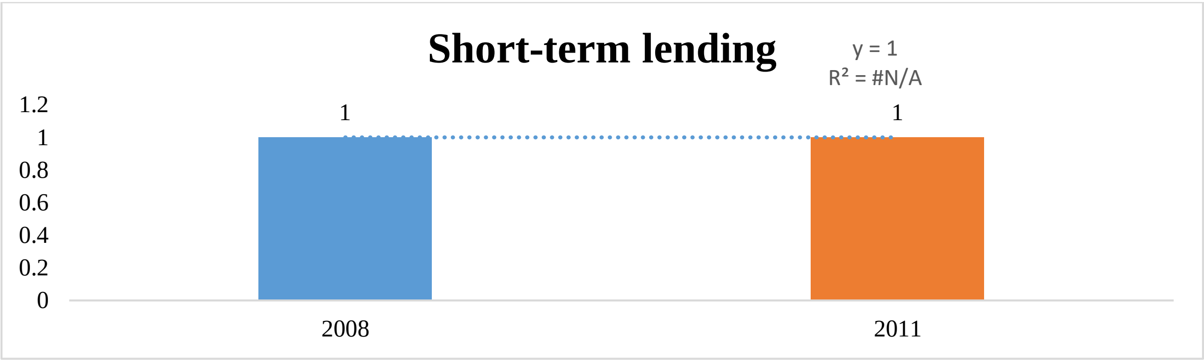

Figure 9: Short-term lending

Source: (Survey Data gathered on 25th October, 2019).

The findings indicated that there is a constant trend in the adoption of short-term securities as well as buy government securities. This only happened during the years 2008 and 2011. However, the strategy was not widely accepted by the countries as it is evidenced by only 2 (8.6%) of the studies surveyed adopting the strategy to lend out its short-term securities as well as buy government securities.

The same case happened in China in order to sustain the economy during the 2004 the inflation-adjusted return on a one-year deposit in Chinese banks averaged –0.5 percent. This was a sharp discontinuity with the late 1990s and the first part of the previous decade, when the real return on the same deposit averaged 3.0 percent. After February 2002, the renminbi depreciated along with the U.S. dollar but the subsequent pace of appreciation was barely sufficient to offset this depreciation. To keep inflation under control, the central bank had to engage in massive sterilization operations, first selling off its entire holdings of government debt and then issuing massive quantities of central bank bills, with bills outstanding by year-end 2010 standing at roughly 4 trillion renminbi, or 10 percent of GDP. The central bank also raised the required reserve ratio to 21.5% by the first quarter of 2011, forcing the banks to place an additional 12.5 trillion renminbi on deposit at the central bank, thus limiting banks' ability to lend. To hold down the cost of these sterilization operations, the central bank paid extremely low interest on required reserves and only slightly more favourable rates on central bank bills. Thus, sterilization operations constituted a massive tax on banks (Lardy, 2011).

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4.2.6 External financing

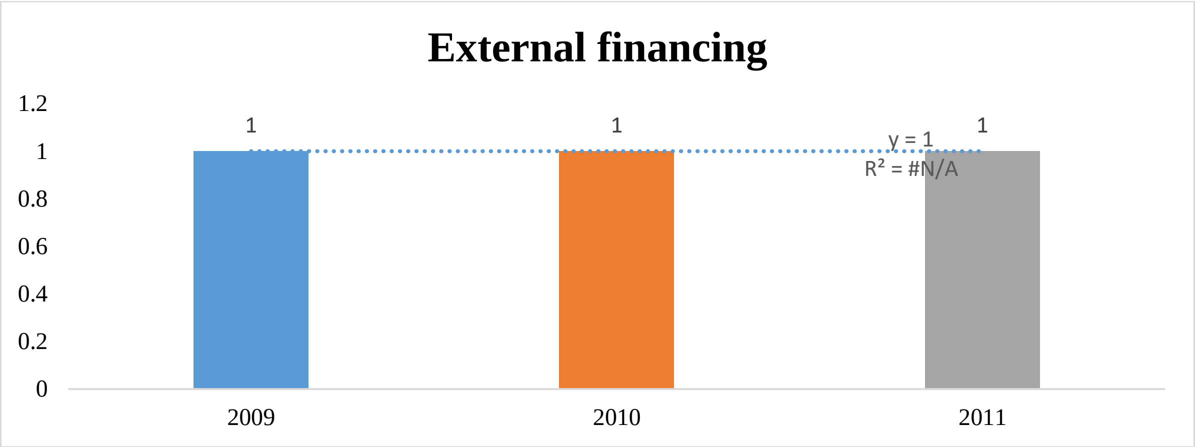

Figure 10: External financing

Source: (Survey Data gathered on 25th October, 2019).

The study indicates that external borrowing was adopted between the years 2009 and 2011. However the adoption was constant and only three studies among the surveyed ones indicated that external funding was used to counter the effects of credit meltdown. For instance several African countries such as Ghana, Liberia, Tanzania, and Zambia in August 2009 during the Obama Administration benefitted from the funds appropriated in the supplemental. More broadly, U.S. policy responses to the impact of the crisis overseas have focused on supporting the policies of multilateral organizations, including the IMF, the World Bank, and the African Development Bank (AfDB). These organizations have increased their lending commitments and created new facilities to help mitigate the impact of the global crisis on emerging market and developing countries worldwide (Arieff, 2010).

4.2.7 Fiscal Policies

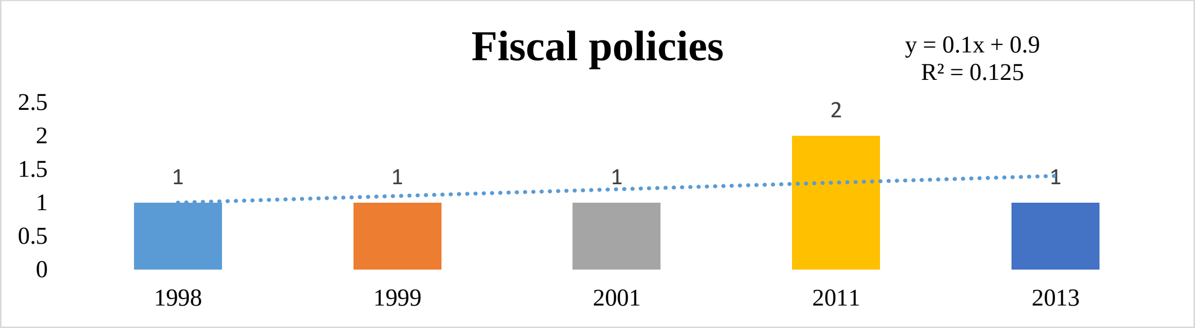

Figure 10: Fiscal Policies

Source: (Survey Data gathered on 25th October, 2019).

The findings of the survey indicate that among the surveyed studies, 8 of them (34.78%) implemented the use of fiscal policies such as the cut down in taxes, subsidies in production costs.

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This was supported by an upward positive slope of the trend line indicated by 0.1 which shows that the adoption of the techniques has been gaining prominence over the years. The government had to reduce their tax rates to help in stabilizing the economy by spurring spending among consumers that is improving the demand in the economy. For instance during the Malaysian financial crisis (1988-1996) tight fiscal and monetary policies were imposed (Rasiah, 1998). The adjustments called for an 18% reduction in government expenditure as well as the postponement of several infrastructure mega-projects such as the Bakun dam, the Express Rail Link, and the land bridge to Thailand. Policies to strengthen the country's balance-of-payments account were pursued. For example, exports were encouraged (tax incentives to boost the manufacturing, Agriculture, etc.) and imports were discouraged (increase in import taxes) (Ariff & Abubakar, 1999).

In 1989 to 1991, the fiscal boost helped to stabilize non-inflationary domestic demand growth in Germany at a time when other countries were experiencing a recession. However, a key fiscal mistake occurred when an ill-timed and overly ambitious consolidation crusade by the government began in 1992 which at the most critical stage, the Bundesbank's argument that fiscal consolidation would prevent inflation did not hold, and measures undertaken to cut borrowing actually pushed inflation higher (Bibow, 2001). This thus proves that the policies has to be pursued with caution.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

In a crisis, actions by central banks via public liquidity injections to banks may not reach the real side of the economy if banks do not have enough capital, prefer to hoard liquidity or to invest in safer assets such as government debt. The study likewise finds that Lowering of interest rates and well as Fiscal Policies are good measures to be adopted by the central banks in conjunction with the governmental regulations. However the study discourages the raising of the prices that is the interest rates since them discourage investors and thus plunge the economy deeper into the credit crunch. This can be concluded from the evidence in Germany, Japan, the U.K. and the U.S. where they tried to respond to the crisis during the '*great depression*' by raising interest rates in 1931-2 in a perverse attempt to defend their currencies, however, it worsened the crisis. Agao (2014) echoes these findings by showing that interest rates have the most significant effect on mortgage uptake compared to other macroeconomic variables such as GDP and level of money supply.

Direct injection of money into the economy was noted as a way to heal chronic failures in the market especially when the money supply is very low and the banks fail due to limited assets. For instance, due to the high impact of the credit meltdown, and bank failures due to limited money supply in the market, the Fed, the Bank of England, and the European Central Bank (ECB) in the 2007-08 crisis intervened by €94.8 billion, with more operations totalling €108.7 billion in the following weeks, to *frontload* the liquidity operations into the first part of the maintenance period (Mizen, 2008). Public lending via state-owned banks might have a useful role to play in financial crises by reducing the credit crunch. A state-owned bank can support lending to the real economy by relying not only on its explicit capital, but also on the implicit capital derived from its access to government and taxpayer funds. This increase in credit supply may bring positive effects for the

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real economy. On the other hand, there is evidence that state-owned banks are generally more inefficient than privately-owned banks. Moreover, a higher willingness to provide public lending in crisis times may imply substantial defaults due to lack of high quality borrowers (demand side) and the potential adverse selection in new borrowers.

5.2 Conclusions

Considering the extent of the problems that credit crunch brings to an economy, it is worth noting that the interventions and solutions to the problem have to be very meticulously planned and pursed. This especially for a developing country as Kenya, measures and strategies have to be laid down early enough in anticipation for such outcomes. In view of the above, it has been noted that countries such as The Great Britain, and the USA, learnt a lesson from the Great Depression during the year 1929 and 1937. As such the two countries' economies were at a better position with the right techniques to successfully manage the 2007 global financial crisis. Thus, the current study heavily draws from the experiences of the super power countries such as USA, UK and China. There strategies such as the use of fiscal and monetary policies were found to effectively bring back the economies to their feet. The increase in such instruments as taxes as well as the increase in prices in the economy is a clear indication of a road to failure since it was found to negatively affect investments and employment.

5.3 Recommendations

The study concludes that the Kenyan government and the Central Bank of Kenya needs to strengthen its fiscal and monetary policies and instruments in order to manage its economy and safeguard it against credit crisis. Thus, the involvement of the government in the affairs of the economy is very Key but the government needs to proceed with caution since the economy is a free market. Since increase in interest rates were found to negatively impact on credit crunch by constricting liquidity, the government need to address the interest rate capping since in the long run it is not a solution to inflation as well as credit crisis.

REFERENCES

Ajao, M. G., & Festus, B. O. (2011). Appraisal of the Effect of the Global Financial Meltdown on the Nigerian Money Market. *International Journal of Economics and Finance*, *3*(4), 95-105.

Arieff, A., Weiss, M. A., & Jones, V. C. (2010, April). The global economic crisis: Impact on sub-Saharan Africa and global policy responses Washington DC: Congressional Research Services. In *Library of Congress* (Vol. 6).

Ariff, M., & Abubakar, S. Y. (1999). The Malaysian financial crisis: economic impact and recovery prospects. *Developing Economies*, *37*(4), 417-438.

Bianchetti, M., & Carlicchi, M. (2011). Interest rates after the credit crunch: Multiple curve vanilla derivatives and sabr. *Available at SSRN 1783070*.

Bibow, J. (2001). *The economic consequences of German unification: The impact of misguided macroeconomic policies* (No. 67). Public Policy Brief.

Edith Cowan Peer Reviewed Journals & Books Publishers
Edith Cowan Journal of Entrepreneurship and Project Management
ISSN: 4521 - 6954
Vol. 3, Issue No. 1, pp 32-52, 2019
www.edithcowanjournals.org

Buffie, E., & Krause, A. S. (1989). Mexico 1958-86: from stabilizing development to the debt crisis. In *Developing Country Debt and the World Economy* (pp. 141-168). University of Chicago Press.

Central Bank of Kenya (2017). *Bank* Supervision Annual Report 2017. Retrieved From: https://www.centralbank.go.ke/uploads/banking_sector_annual_reports/849246690_2017%20Annual%20Report.pdf

Central Bank of Kenya (2018). *Bank Sup*ervision Annual Report 2017. Retrieved From: https://www.centralbank.go.ke/wp-content/uploads/2018/03/Summary-of-the-study-on-Interest-rate-Caps_February-2018.pdf

Cramer, C., Johnston, D., & Oya, C. (2009). Africa and the credit crunch: from crisis to opportunity. *African Affairs*, *108*(433), 643-654.

Cuesta, J. I., & Sepulveda, A. (2018). Price regulation in credit markets: A trade-off between consumer protection and credit access. *Available at SSRN 3282910*.

Federal Deposit Insurance Corporation. (1997). *History of the Eighties: Lessons for the Future*. Federal Deposit Insurance Corporation.

Frank, A. G. (1981). *Reflections on the world economic crisis*. London: Hutchinson.

Girardi, A., Ventura, M., & Margani, P. (2018). An Indicator of Credit Crunch using Italian Business Surveys.

Heilemann, U., & Rappen, H. (1997). *The Seven Year Itch: German Unity from a Fiscal Viewpoint* (No. 6). American Institute for Contemporary German Studies.

Jiménez, G., Peydró, J. L., Repullo, R., & Saurina Salas, J. (2018). Burning money? Government lending in a credit crunch.

Lardy, N. R. (2011). Sustaining China's Economic Growth after the Global Financial Crisis (Washington: Peterson Institute for International Economics).

Manikumar, K. A. (2003). *A Colonial Economy in the Great Depression, Madras (1929-1937)*. Orient Blackswan.

Marco, B., & Mattia, C. (2012). Interest Rates after the Credit Crunch: Multiple-Curve Vanilla Derivatives and SABR.

McKenzie, D., & Woodruff, C. (2008). Experimental evidence on returns to capital and access to finance in Mexico. *The World Bank Economic Review*, *22*(3), 457-482.

Miller, H. (2013). Interest rate caps and their impact on financial inclusion. *Economic and Private Sector, Professional Evidence and Applied Knowledge Services*.

Miller, H. (2013). Interest rate caps and their impact on financial inclusion. *Economic and Private Sector, Professional Evidence and Applied Knowledge Services*.

Edith Cowan Journal of Entrepreneurship and Project Management
ISSN: 4521 - 6954
Vol. 3, Issue No. 1, pp 32-52, 2019
www.edithcowanjournals.org

Mizen, P. (2008). The credit crunch of 2007-2008: a discussion of the background, market reactions, and policy responses. *Federal Reserve Bank of St. Louis Review*, *90*(September/October 2008).

Ocampo, J. A. (2009). Latin America and the global financial crisis. *Cambridge journal of economics*, *33*(4), 703-724.

Ocampo, J. A. (2009). Latin America and the global financial crisis. *Cambridge journal of economics*, *33*(4), 703-724.

of political challenges. Claves de la Economia Mundial.

Padayachee, V. (2016). Global economic recession: effects and implications for South Africa at a time

Pastor Jr, M. (1989). Latin America, the debt crisis, and the International Monetary Fund. *Latin American Perspectives*, *16*(1), 79-110.

Peydró, J. L., Jiménez, G., Repullo, R., & Saurina, J. (2018). *Burning money? Government lending in a credit crunch* (No. 1577).

Rasiah, R. (1998). The Malaysian financial crisis: capital expansion, cronyism and contraction. *Journal of the Asia Pacific Economy*, *3*(3), 358-378.

Saint-Etienne, C. (2013). *The Great Depression, 1929-1938: Lessons for the 1980's*. Hoover Press.

Umuro, G. A. (2017). The Effect of Interest Rate on the Uptake of Loans: The Case of Commercial Banks in Kenya.