

## Role of Public Capital Inflows in Financial Inclusion in Uganda

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### Abstract

*This paper provides an empirical analysis of the role of public capital inflows in financial inclusion in Uganda. Financial inclusion was measured using three dimensions (access, usage and quality). Whereas public capital inflows were measured using three proxies of loans, grants and donations. The study anchored on financial intermediation theory. The target population was public organisations that have received public capital in Uganda. The study used data collected from Bank of Uganda and Ugandan Investment Authority, Ministry of Finance for the period 2012-2016. A cross sectional descriptive design was used while data was analyzed using descriptive statistics and multivariate Logistic regression analysis. It was found that public capital inflows did not play any role in promoting financial inclusion in Uganda. From the findings the study concluded that loans contributed 89% of public capital while grants contributed 11%. The study recommends that government particularly Bank of Uganda, Ministry of Finance and Uganda Investment Authority to formulate policies to ensure loans are reduced and parliament through its oversight role should ensure this happens. Further, grants and donations which are sustainable and stable sources of inflows should be deepened and widened by ensuring that adequate accountabilities for grants are done.*

**Keywords:** Public Capital, Financial Inclusion, Inflows, Uganda.

### Introduction

The government of Uganda has continued to reform the policy and legal environment for the financial sector to foster the optimization of private and social benefits from financial intermediation given the rapidly changing financial sector landscape. These reforms are designed to leverage the financial sector to support Uganda's economic growth and socio-economic transformation agenda. Some of the legislative and institutional reforms that have been undertaken include the amendment of the Financial Institutions Act, 2004 to allow Banking Financial Institutions supervised by the Central Bank to provide Islamic Financial products and services, Bancassurance and Agent Banking. Independent regulatory bodies for the Non-Bank Financial Services have also been established to build consumer and investor confidence in Uganda's financial sector. There are now numerous investment opportunities for both existing and new participants in Uganda's financial sector and indeed the region's financial sector with the promise for scale through provision of financial services through digital platforms.

Uganda's financial sector is currently regulated under the following legal frameworks: the Financial Institutions Act, 2004 as amended; the Microfinance Deposit-Taking Institutions Act, 2003; the Insurance Act, 2017; the Uganda Retirement Benefits Regulatory Authority Act, 2011; the Capital Markets Authority Act, 2011 as amended; the Tier 4 Microfinance Institutions and Money Lenders Act, 2016 and the Anti-Money Laundering Act, 2013 as amended. Currently Government is considering reforming the policy and legal environment further to respond to the rapidly changing financial landscape largely driven by new digital technological advancements and new participants to mitigate the new risks without stifling innovation.

Public investment in physical infrastructure, utilities, innovative activity, education and clean energy are identified by the National Development Plan II as fundamental enablers for socio-economic transformation of the country, in line with Uganda Vision 2040. It is, however, clear from the analysis above that the response of private investment to increased government spending on

infrastructure has been weak. Strengthening this response is an imperative for realizing the much needed fiscal stimulus of the expansionary fiscal policy that government is pursuing ahead of the effective date of the East African Community monetary union and its convergence criteria. Furthermore, with the Public Private Partnership Act (2015) in place, public investments involving private investors can go a long way in supporting effective management and implementation of projects for higher economic growth returns. The following are areas where the government of Uganda uses capital which comes from public sources.

**Budget Support.** This is where capital resources from a Development Partner are transferred directly to the consolidated fund of the recipient Country following the fulfilment of agreed conditions for disbursement. Budget support is normally in two forms namely; General Budget Support and Sector Budget Support (earmarked/targeted towards a specific Sector). The capital resources thus received are part of the national resources of the country and are consequently used in accordance with the public financial management system of Uganda. These resources are appropriated by Parliament as part of government funds.

**Project Support.** Under this modality of financing, Government of Uganda which is the recipient country enters into an agreement with the Development Partner and both agree on a set of inputs, activities and outputs to reach specific outcomes within a defined timeframe, with a defined budget and in a defined area.

**Export Credit financing.** This is where the borrower normally Government Of Uganda and a Development Partner Export Credit Agency pre-identify a contractor to implement a project largely in the borrower's jurisdiction. The main objective of this financing is to support domestic companies of the ECA to carry out international export operations and other activities. The financing facilitates the companies to remove the risk of uncertainty of exporting to other countries and underwrite political risks and commercial risks of overseas investments, thus encouraging exports and international trade. For the case of Uganda, this arrangement has been used to finance government projects implemented by such companies.

**Technical Assistance.** This basically entails the transfer of ideas, knowledge, practices, technologies or skills from either development partner identified experts or procured experts under respective projects. This knowledge transfer is mainly for policy development, institutional development, capacity building, and project or programme support.

**Off Budget Support.** This covers all Official Development Assistance referred to as (ODA) not channeled through Government systems and structures both in form of disbursement and management; hence not appropriated by Parliament. The related project activities and finances are mainly channelled through NGOs, CBOs or directly implemented by Development Partners.

## **Public capital to Uganda**

Government of Uganda has over the years been getting financing from public sources to undertake its priority projects. During the Financial Year 2017/18 for instance, financing which were received from public sources reached US\$ 1,150.18 million compared to US\$ 884.2 million received in 2016/17 financial year. (Ministry of Finance, 2018). Of the total resources mobilised, 53% (US\$ 610.60 million) were in form of Loans and 47% (US\$ 539.58 million) were Grants. This represents a 30% increase in external public resources from where resources were mobilised compared to the Financial Year 2016/17 (Ministry of Finance, 2018). Although loans contributed more to the resources received, it is, however, worthy noting that the increase in total resources received is as well attributed to an increase of about US\$ 268.58 million committed through grant financing from US\$ 271.0 million in the Financial Year 2016/17. The amounts committed through loans financing decreased by US\$ 2.60 million.

Trends in public external sources of financing over the last five years show an upward turn from US\$ 496 million in the Financial Year 2012/13 to US\$ 2,911.10 million in the Financial Year 2014/15, thereafter took a downward trend to US\$ 1,150.18 million in Financial Year 2017/18. The decline in loans contracted is attributed to government deliberate efforts of adhering to the Public Finance Management Act 2015 as well the Public Debt Management framework of ensuring short and long-time debt sustainability. The increase in grant commitments is mainly attributed to US\$ 245.57

Million from Austria and US\$ 175.31Million from Global Fund towards the Health Sector. (Ministry of Finance, 2018).

Public capital inflows in the form of public debt is the totality of public and publicly guaranteed debt owed by any level of government to either citizens or foreigners or both. As at end of December 2017, the outstanding total public debt, including publicly guaranteed debt, amounted to US\$ 10.24 billion compared to US\$ 8.7 billion compared to end December 2016, an increase of 21.8%. Domestic debt increased from US\$ 3.2 billion in December 2016 to US\$ 3.3 billion at end December 2017, an increase of 2.6%. (Ministry of Finance, 2018). On the other hand, external debt (Disbursed and Outstanding (DOD)) increased by 17.4% from US\$ 5.5 billion at end December 2016 to US\$ 6.8 billion at end December 2017. Domestic and external debt accounted for 32.8% and 7.2% respectively by end December 2017.

Public and publicly guaranteed (PPG) external debt stock has continued to rise over the last five years, increasing to US\$ 6.9 billion in December 2017 from US\$ 5.5 billion in December 2016, a rise of 26%. The increase was attributed to disbursements from commercial syndicated loans, multilateral and bilateral creditors as well as foreign exchange rate movements.

Uganda's external stock of debt outstanding and disbursed has continued to increase overtime and as of December 2017 stood at US\$ 4.26 billion. The debt exposure had dropped substantially to US\$ billion in the Financial Year 2008/09 because of the Uganda's debt relief under the Multilateral Debt Relief Initiative (MDRI), nonetheless, subsequent developments following the MDRI tend to have increased Government's appetite to contract more debt to enhance infrastructure developments.

### **Statement of the problem**

Despite the remarkable benefits the Ugandan economy stands to get from public capital inflows and its known contribution to financial inclusion and standard of living of the people of Uganda, the problem arises as to what extent the Ugandan economy should depend on public capital to promote financial inclusion. The most critical challenge of poor but also developing countries in this 21st century, Uganda inclusive is over reliance on public sector as well as public capital inflows. With this heavy reliance on the public sector as well as public capital, the extend of financial inclusion is not very encouraging. This study, therefore, did investigate whether initiatives like public capital inflows is a means through which financial inclusion can be promoted and further examined the relationship between public capital and financial inclusion. The following research questions are, therefore stated. What is the level of public capital to Uganda? What is the relationship between public capital inflows and financial inclusion in Uganda?

The main objective of this study was to examine the role of public capital inflows in Financial Inclusion in Uganda. Specifically, the following objectives guided the study:

- Ascertain the level of Public capital inflows to Uganda
- Examine the relationship between public capital inflows and financial inclusion in Uganda

Furthermore, the study was guided by the following hypothesis: Ho1: The level of public capital inflows to Uganda are not significant. Ho2: There is no relationship between public capital inflows and financial inclusion in Uganda.

The remaining parts of this study are arranged as follows. Section two of the study presents literature review, section three presents the methodology whereas section four presents data and results as well as a discussion of the results. Section five presents conclusion and specific policy recommendations.

### **Literature review**

#### **Theoretical review**

The theory of financial intermediation which analyses the role of financial intermediaries in the economy and is associated three theories namely; information problem, transaction costs and money regulation guided the study. This theory was started by (Gurley and Shaw, 1960).

The first theory of financial intermediation is the informational asymmetries argument. These asymmetries are of an ex ante nature, generating adverse selection, they can be interim, generating

moral hazard, and they can be of an ex post nature, resulting in costly state verification including enforcement. The informational asymmetries issue generates market imperfections. These imperfections in the market leads to specific forms of transaction costs within the market. However, Financial intermediaries seem to overcome these transaction costs in a partial way.

(Diamond and Dybvig, 1983) do recognize that banks are seen as coalitions of several depositors that give households insurance against idiosyncratic shocks that adversely affect their liquidity position. Further, (Leland and Pyle, 1977) see financial intermediaries as information sharing coalitions. (Diamond, 1984) for instance demonstrate that intermediary coalitions do achieve significant economies of scale. Further, (Diamond, 1984) is equally of the view that financial intermediaries act as delegated monitors on behalf of ultimate savers. Monitoring will be viewed to involve increasing returns to scale, which therefore, implies that specialization may be an attractive way. Individual households will delegate the monitoring activity to such a specialist, who are financial intermediaries. The households will as such, put their cash and other deposits with the intermediary. Furthermore, depositors will positively value the intermediary's role and involvement in the ultimate investment (Hart, 1995). Also, they can be assigned a positive incentive effect for instance of short-term debt, and deposits, on bankers (Hart and Moore, 1995).

Researchers like (Qi, 1998), (Diamond and Rajan, 2001) all demonstrate that deposit finance creates incentives for bank's management. Liquid assets of the bank result in a fragile financial structure that is essential for disciplining the bank's management. Note that in the case of households that do not turn to intermediated finance but prefer direct finance, there is still a brokerage role for financial intermediaries notably among others investment banks (Baron, 1979 and 1982). Based on this, the reputational effect is equally at stake. In financing, it is important to note that the reputation of both the borrower and the financier are relevant (Hart and Moore, 1998). Furthermore, (Dinç, 2001) studies the effects of financial market competition on bank's reputation and argues that the incentive for the bank to keep its commitment is derived from its reputation, as well as the number of banks in competition including their reputation, and the competition arising from bond markets. These four aspects clearly interact (Boot, Greenbaum and Thakor, 1993).

The informational asymmetry theory focusses on the bank/borrower and the bank/lender relationships. In bank lending, one can easily distinguish transactions-based lending and relationship lending. In the former, information which is relatively available at the time of loan origination is used. In the latter, data gathered over the course of the relationship with the borrower is used (Lehman and Neuberger, 2001; Kroszner and Strahan, 2001; (Berger and Udell, 2002). The central themes in bank/borrower relationship are screening and monitoring function of the banks. The adverse selection problem as pointed out by (Akerlof, 1970), and credit rationing as pointed out by (Stiglitz and Weiss, 1981), the moral hazard problem as noted by (Stiglitz and Weiss, 1983) and of course the ex-post verification problem which was pointed by (Gale and Hellwig, 1985). The central themes in bank/lender relationship are; the bank runs, why they do occur, how they can be prevented, including their economic consequences (Kindleberger, 1989; Bernanke, 1983; Diamond and Dybvig, 1983). Another avenue in the bank/lender relationship are models for competition between banks for the deposits in relation to their lending policies and the probability that they fulfill their obligations as pointed out by (Boot, 2000; Diamond and Rajan, 2001).

The second theory of financial intermediation is the transaction costs (Benston and Smith, 1976; Campbell and Kracaw, 1980; Fama, 1980). In contrast to information problem above, this theory does not in a way contradict the assumption of complete markets. It is based on non-convexities in transaction technologies. Transactions costs, financial intermediaries act as coalitions of individual lenders and/or borrowers who exploit economies of scale. The issue of transaction costs includes just not only exchange costs (Tobin, 1963; Towey, 1974; Fischer, 1983), but as well any search costs, monitoring including auditing costs (Benston and Smith, 1976). On the transaction costs, the role of the financial intermediaries is to transform financial claims into other types of claims which is qualitative asset transformation. Because of that, they therefore, offer liquidity (Pyle, 1971) and diversification opportunities (Hellwig, 1991). The provision of liquidity is as such a key function for savers and investors and increasingly for corporate customers, whereas the provision of diversification

is increasingly being appreciated in personal and institutional financing. Invariably, researchers like (Holmström & Tirole, 2001) provide a suggestion that liquidity should play a key role in asset pricing.

The third theory of financial intermediation is the regulation of money production and saving in financing of the economy as noted by (Guttentag and Lindsay, 1968; Fama, 1980; Mankiw, 1986; Merton, 1995b). Regulation function affects solvency and liquidity with the financial institutions. (Diamond and Rajan 2000) reveal that bank capital affects bank safety, bank's ability to refinance, and bank's ability to extract repayment from borrowers. The legal-based view asserts regulation as a crucial factor that shapes the financial economy (La Porta et al., 1998). Policy makers including users of financial information view financial regulations as something that is exogenous to the financial industry. However, activities of intermediaries inherently ask for regulation. This is because banks by the way and the art of their activities are inherently insolvent and illiquid (Merton and Bodie, 1993). Furthermore, money and its value, the key raw material of the financial services industry, to a large extent is both defined and determined by the state. Safety and soundness of the financial system as a whole and the enactment of industrial, financial, and fiscal policies are regarded as the main reasons to regulate the financial industry (Kareken, 1986; Goodhart, 1987; Boot and Thakor, 1993).

## **Empirical review**

This section provides empirical studies conducted on public capital inflow components notably loans, grants and donations as seen below.

A study jointly done by (UNDP, Growing Inclusive Markets and New American Foundation, 2011) on a third way for official development assistance, savings and conditional cash transfers to the poor. Evidence from Mexico's Oportunidades program suggests that conditional cash transfers (CCTs) can increase savings and investment, promote banking, and create more responsible spending habits. These ancillary effects are in addition to the documented health and educational outcomes discussed earlier.

The advantage of this study is that it was jointly done and as such, there was thorough robustness of data and analysis including the approach in which the study was done. However, this study is not within the time scope of this current study which is between 2012 and 2016. As such, reliance on such data, results and approach which is way long will result in inconsistency in conclusion and therefore, may not be relied upon for policy decisions. Further, this study was done in a more developed country- Mexico as opposed to Uganda, a less developed country where this current study is being done.

Going further, (Barrientos, David Hulme, and Joseph Hanlon, 2010) recently argued that rather than maintaining a huge aid industry to find mechanism to support the very poor, it is crucial and important to give money to the poor people directly for them (the poor) to find any effective means that allows them to escape if not reduce poverty. Invariably, the Consultative Group to Assist the Poor (CGAP, 2009) reported that over 140 million people worldwide are receiving cash donations, grants or transfers from their very own governments.

While it is generally agreed based on the above data and findings including the conclusions thereof that social assistance from government facilitates financial inclusion which is the interest of this current study as well, however, it is equally worth noting that while such a huge number of people do receive cash transfers from their governments in form of social support, only one quarter do receive these cash benefits into a financially inclusive bank account leaving three quarters of them not financially inclusive.

At a micro level, there are mainly three basic needs which drive the financial actions of the poor people. These basic needs include among others the following: Financial basics including how to manage the cash flows to transform the irregular income into a reliable resource which meets the daily needs of the poor households; the coping mechanism with the risks associated with the poor including emergencies that derail families with the very little in their reserve; and raising lump sums amount that would allow the poor families to seize any opportunities and pay for all household expenses. It is equally important to recognize that at a macro level just like at micro level, the current reports from economic models do suggest that lack of access to financial services among others can be, according to (World Bank, 2008), the critical mechanism for generating persistent income inequality or poverty traps, as well as lower growth.

As illustrated by the World Bank report, countries that have the highest percentage of households below poverty lines are associated with the lowest deposit account penetration. However, there are few exceptions which outliers are. Take for instance, Mongolia which has a high banking penetration service. This could be attributed to government payments which are made through accounts for children and families. All these facts

do point to the fact that it is possible to provide bank accounts to populations largely in poverty. One sample of 52 industrial and developing countries over the period 1980 to 2000 looked at the relationship between financial development (proxied by the total value of private credit relative to GDP), poverty alleviation, and changes in the distribution of income.

Notable authors like (Beck, Demirgüç-Kunt, and Levine, 2006) showed in their study that financial development: Boosts the growth rate of poorest quintile's income, suggesting that financial development reduces income inequality, which therefore, suggests that financial development reduces income inequality significantly; Induces a drop in Gini coefficient measure of income inequality even though controlling for real per capita GDP, thus suggesting that financial development reduces income inequality beyond the relationship between finance and aggregate growth; finally, financial development reduces the fraction of the population who are living on less than 1 dollar per day and the poverty gap when controlling for average per capital GDP. They concluded therefore, that the poor people in turn pay a penalty for being poor and for their (poor) lack of access to financial services and products when participating in the open markets.

In a study conducted by (Adams, Sakyi and Opoku, 2016) on whether capital inflows promote domestic investment using a case study of 25 Sub Saharan African Countries from the period 1981 to 2010, they reported that foreign direct investment positively impacts domestic investment, but external debt has a negative impact on domestic investment in the long run. This implies that increase in foreign direct investment and/or reduction in external debt will promote domestic investment in sub-Saharan Africa. Therefore, measures must be put in place to attract more foreign direct investment and reduce the inflow of external debt in the region.

A study conducted by (Salome Musau, Stephen Muathe and Lucy Mwangi, 2018) on the topic Financial Inclusion, Bank Competitiveness and Credit Risk of Commercial Banks in Kenya which analyzed the effect of financial inclusion on credit risk and the mediation effect of bank competitiveness of commercial banks in Kenya. Financial inclusion was measured using three dimensions of bank availability, bank accessibility and bank usage, bank competitiveness used (HHI) while credit risk was represented by the non-performing loans ratio. The study was anchored on financial intermediation theory supported by finance growth theory and asymmetry information theory. The results obtained found that bank availability, bank accessibility and bank usage had significant effect on credit risk of commercial banks in Kenya. Bank competitiveness was found to partially mediate the relationship between financial inclusion and credit risk.

This study has several advantages which are like this current one including the following: the time scope of the study is done in 2018 as such, the data and findings including the conclusions are very updated, it has similar variables which are loans and financial inclusion, the study is within East Africa just like this current one done in Uganda.

In another related study conducted by (Vasudha et al, 2016), on how using Department of Posts (DoP) promotes financial inclusion in grants payment in Visakhapatnam. It examines, by studying the issues in disbursement of Social Security Pensions (SSPs) in a region. The empirical study is confined to only one initiative of DoP, that is, SSP disbursements in Visakhapatnam district of Andhra Pradesh. The primary data was collected during the transition period when DoP was into SSP disbursements in urban as well as rural areas of Visakhapatnam on an experimental basis (February–April 2015). Altogether eight hypotheses were tested for significance, based on the data collected through observation, interviews, survey and literature review. The results show that DoP has been successful in achieving the first level of financial inclusion and has to work towards achieving the second level through collaborative partnerships.

However, some other studies conducted on the same topic do contradict the findings of (Adams, Sakyi and Opoku, 2016). For instance, the study done by (Muhammad Shahbaz and Mohammad Mafizur Rahman, 2010). Furthermore, another study conducted by (Pierre-Olivier Gourinchas and Olivier Jeane, 2013) reported that there is indeed a relationship between public capital inflows and financial inclusion.

## Methodology

### Design

A cross sectional descriptive designs were used in the study. The data used in this study are obtained from published annual reports and websites of the World bank, Bank of Uganda, Uganda Investment Authority and thesis data. The study covered the period from 2012 to 2016.

### Empirical model

$$Y1 = \alpha + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \beta_4 X4 + \beta_5 X5 + \beta_6 X6 \quad (\text{Model 1})$$

Where

Y1= Access to financial inclusion

$\alpha$  = Constant

$\beta_i$ = Coefficients of the explanatory variables

X1=Loans

X2=Grants

X3=Donations

X4=Inflation

X5=Interest rate

X6=Exchange rate

X7= Gross Domestic Product

$$Y2 = \alpha + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \beta_4 X4 + \beta_5 X5 + \beta_6 X6 \quad (\text{Model 2})$$

Where

Y2= Usage of financial services

$\alpha$  = Constant

$\beta_i$ = Coefficients of the explanatory variables

X1=Loans

X2=Grants

X3=Donations

X4=Inflation

X5=Interest rate

X6=Exchange rate

X7= Gross Domestic Product

$$Y3 = \alpha + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \beta_4 X4 + \beta_5 X5 + \beta_6 X6 \quad (\text{Model 3})$$

Where

Y3= Quality of financial services

$\alpha$  = Constant

$\beta_i$ = Coefficients of the explanatory variables

X1=Loans

X2=Grants

X3=Donations

X4=Inflation

X5=Interest rate

X6=Exchange rate

X7= Gross Domestic Product

## Results

### Level of public capital inflows

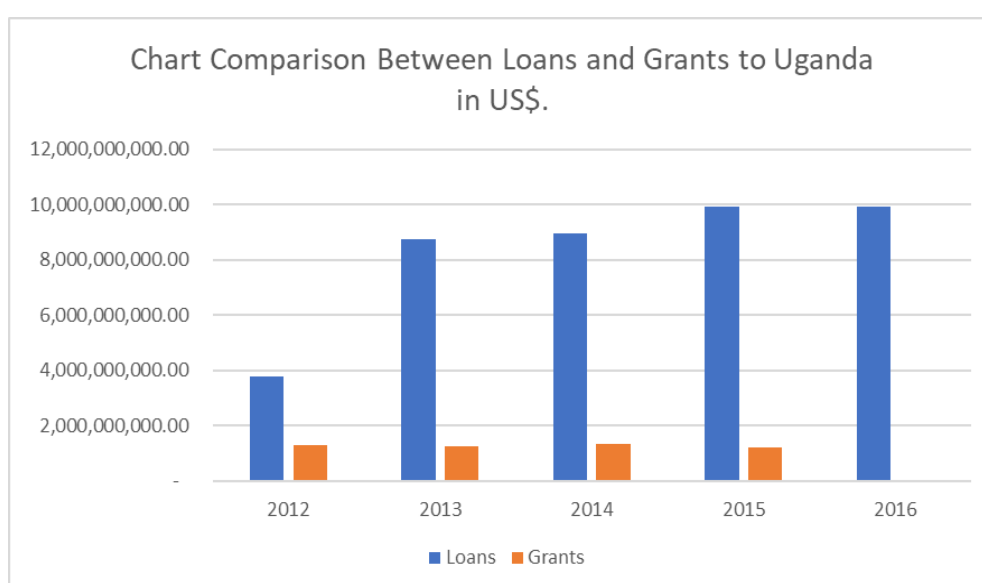
The study sought to establish in objective one, the level of public capital inflows to Uganda. Public capital inflow included Loans and grants. The level of public capital inflows to Uganda from 2012 to 2016 is as shown in the table below.

**Table 4.1.** Level of public capital to uganda

Year	Loans in US\$	Grants in US\$	Total in US\$
2012	3,779,371,000.00	1,315,100,000.00	5,094,471,000.00
2013	8,739,157,000.00	1,266,460,000.00	10,005,617,000.00
2014	8,952,316,000.00	1,340,220,000.00	10,292,536,000.00
2015	9,925,262,000.00	1,230,540,000.00	11,155,802,000.00
2016	9,946,994,000.00	-	9,946,994,000.00
<b>Total</b>	<b>41,343,100,000.00</b>	<b>5,152,320,000.00</b>	<b>46,495,420,000.00</b>
<b>Percentage</b>	<b>89%</b>	<b>11%</b>	<b>100%</b>

Source: Researcher’s calculation based on data from Ministry of Finance and BoU

The same information above can as well be shown using a chart comparing the two proxies of public capital inflows as shown below.



**Figure 1.0.** Level of public capital inflows to Uganda

Source: Researcher’s calculation based on data from Ministry of Finance and BoU

From the table and chart above, it is seen that two categories of public capital inflows were significant to the Ugandan economy and these are; Loans and Grants. Of the total inflows for 2012 of US\$ 5,094,471,000.00, Loans contributed US\$ 3,779,371,000.00 while Grants contributed US\$ 1,315,100,000.00. In 2013, Loans contributed US\$ 8,739,157,000.00 while grants contributed US\$ 1,266,460,000.00 with the total of US\$ 10,005,617,000.00. In 2014, total inflows were US\$ 10,292,536,000.00 and loans contributed US\$ 8,952,316,000.00 while grants contributed US\$ 1,340,220,000.00. In 2015, loans contributed US\$ 9,925,262,000.00 while grants contributed US\$ 1,230,540,000.00 with a total of US\$ 11,155,802,000.00. In 2016, loans contributed US\$ 9,946,994,000.00 while grants contributed US\$ 0.00 with a total of US\$ 9,946,994,000.00.

Overall, loans contributed US\$ 41,343,100,000.00 while grants contributed US\$ 5,152,320,000.00 with an overall total of US\$ 46,495,420,000.00. The contribution of loans to public capital inflows to Uganda represented 88.92% while grants represented 11.08% during the years 2012 to 2016.

### **Relationship between public capital inflows and financial inclusion**

The second objective of the study was to establish the relationship between public capital inflows and financial inclusion in Uganda. In this objective, the null hypothesis (H0) stated that there was no relationship between public capital inflows and financial inclusion. The table below is a correlation matrix of public capital inflows and financial inclusion.



**Table 4.1. Correlations**

		Financial Inclusion	Public Capital Inflows
Financial Inclusion	Pearson Correlation	1	-.012
	Sig. (2-tailed)		.685
	N	1074	1074
Public Capital Inflows	Pearson Correlation	-.012	1
	Sig. (2-tailed)	.685	
	N	1074	1074

Source: Primary data

The correlation results show that the coefficient  $r = -0.012$  and its level of significance  $p = 0.685$  for a sample of  $N = 1,074$ . This result shows that as public capital inflows increase, financial inclusion does not move in the same direction since the relationship is negative. Therefore, since the  $p$  value ( $p = 0.685$ ) is more than the alpha value  $\alpha = 0.05$ , ( $0.685 > 0.05$ ), the null hypothesis ( $H_0$ ) is retained/accepted and the alternative hypothesis ( $H_1$ ) is rejected. This is because there is inconclusive evidence about the significance of the relationship between public capital inflows and financial inclusion.

A regression analysis was established to determine if public capital inflows can predict financial inclusion. The results are shown in the tables below.

**Table 4.2. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.012 <sup>a</sup>	.000	.000	8.24369
a. Predictors: (Constant), Public Capital Inflows				

Source: Primary data

**Table 4.3. ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.191	1	11.191	.165	.685 <sup>a</sup>
	Residual	72851.387	1072	67.958		
	Total	72862.578	1073			
a. Predictors: (Constant), Public Capital Inflows						
b. Dependent Variable: Financial Inclusion						

Source: Primary data

**Table 4.4. Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	42.384	.868		48.848	.000
	Public Capital Inflows	-.026	.063	-.012	-.406	.685

a. Dependent Variable: Financial Inclusion

Source: Primary data

In table 4.25, the proportion of variance (R<sup>2</sup>) is 0.000, which is an estimate for how well public capital inflows predict financial inclusion. Therefore, from the results, public capital inflows do not completely predict financial inclusion (0.0%).

To determine the direction and strength of the relationship between public capital inflows and financial inclusion, the standardize beta coefficient is important. In the above table, the Beta Coefficient is negative,  $\beta = -0.012$  indicating that a decrease in public capital inflows does not influence financial inclusion.

Therefore, from the above analysis as seen in the tables, the results of the regression showed that public capital inflows do not predict financial inclusion;  $P < 0.001$  ( $R^2 = 0.000$ );  $F(1, 1072) = 0.165$  and  $\beta = -0.012$ .

In the table below, a further correlation analysis was run for all the independent variables which constitute public capital inflows (Official Development Assistance) against financial inclusion to determine if each of them as a relationship with financial inclusion.

**Table 4.5. Correlations**

		Public Capital Inflows	Financial Inclusion
Public Capital Inflows	Pearson Correlation	1	-.012
	Sig. (2-tailed)		.685
	N	1074	1074
Financial Inclusion	Pearson Correlation	-.012	1
	Sig. (2-tailed)	.685	
	N	1074	1074

Source: Primary data

From the above table, the correlation results between Official Development Assistance and financial inclusion show that the coefficient  $r = -0.012$  and its level of significance  $p = 0.685$  for a sample of  $N = 1,074$ . This result show that has official development Assistance increase, financial inclusion does not move in the same direction since the relationship is negative. Therefore, since the p value ( $p = 0.685$ ) is more than the alpha value  $\alpha = 0.05$ , ( $0.685 > 0.05$ ), the null hypothesis (H<sub>0</sub>) is retained/accepted and the alternative hypothesis (H<sub>1</sub>) rejected. This is because there is inconclusive evidence about the significance of the relationship between official development assistance and financial inclusion.

## Conclusions and policy recommendations

The conclusions and policy recommendations arrived at are presented objective by objective in congruence with the questions and hypothesis of the study as shown below.

### Conclusion

Level of public capital Inflows.

The first objective of the study was to ascertain the level of public capital inflows to Uganda. The first research question was; what is the level of private capital inflows in Uganda? From the results in Table 4.1, it is therefore, concluded that the level of public capital inflows to Uganda from 2012 to 2016 was US\$ 46,495,420,000.00. With loans contributing US\$ 41,343,100,000.00 (89%) while grants contributing US\$ 5,152,320,000.00 (11%). From the findings in Table 4.1, it is further concluded that loans are the biggest source of private capital inflow to Uganda.

Relationship between public capital inflows and financial inclusion the second objective of the study was to examine the relationship between public capital inflows and financial inclusion. The research question was; is there a relationship between public capital inflows and financial inclusion? And the hypothesis was stated as: There is no relationship between public capital inflows and financial inclusion. From the results in Table 4.2, it is therefore, concluded that since the p value ( $p = 0.685$ ) is more than the alpha value  $\alpha = 0.05$ , ( $0.685 > 0.05$ ), the null hypothesis (H<sub>0</sub>) is retained/accepted and the alternative hypothesis (H<sub>1</sub>) is rejected. This means that the study did not get any statistical evidence to suggest a relationship between public capital inflows and financial inclusion in Uganda.

## Policy recommendations

The recommendations from the study are presented objective by objective. From the study findings, the following recommendations are made:

Reduce the level of loans. Loan is a form of capital which attracts interest payment and is expensive for a developing country like Uganda. To reduce the level of loans to Uganda, the following could be done: Develop the size and quality of the Ugandan market to attract and retain investors who will pay different kinds of taxes to the government, Government agencies like Uganda Revenue Authority to ensure the tax is progressive and taxes the rich than taxing the poor who have little to pay, reducing the period of tax holiday for companies who are currently enjoying at the expense of the poor local populations.

Increase the level of grants. Grants and donations are the very cheap means to encourage more capital inflow to the Country. Donations from Charities, developed countries, foundations, clubs, individuals and governments should be encouraged as much as possible.

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