NATIONAL IDENTITY OWNERSHIP AND FINANCIAL INCLUSION IN UGANDA

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Abstract

Ownership of a unique and legal identity is crucial for financial inclusion in Uganda as the majority of financial service providers demand a national identity (ID) to satisfy the KYC (Know your customer) requirements. This study attempts to examine the effect of ownership of a national ID on financial inclusion in Uganda. The study utilizes the 2017 World Bank Global Findex data and finds that national ID ownership is statistically significant in predicting the likelihood of being financially included in Uganda. With 95% confidence, national ID ownership, phone ownership, education, income quintile, and employment status significantly predict the likelihood of being financially included in Uganda. The study further reveals that an individual who owns a national ID, owns a phone and has secondary school education, is in the richest 20% income quintile, and is in the workforce is more likely to be financially included compared to the same individual without a national ID although the result is not statistically significant. Generally, the study argues that Uganda can boost financial inclusion by harnessing ID ownership among the financially excluded. The study recommends that national ID ownership policies should be integrated with other policies such as human capital development, income equality, employment, and increasing phone ownership in order to achieve efficient outcomes.

1.0 Introduction

1.1 Background

Existing literature has proven that financial inclusion is an effective tool for minimizing poverty and advancing the growth of the economy (Chibba, 2009; Cihak & Singh, 2013; Park & Mercado, 2015), yet a significant portion of the global population – estimated at one billion, do not have any means of identity for financial registration purposes (World Bank, 2020). Through financial participation, people are better propelled to establish their own business ventures, mitigate risks, develop the necessary human capital skill, and contribute more to the economy. (Demirgüç-Kunt et al, 2014).

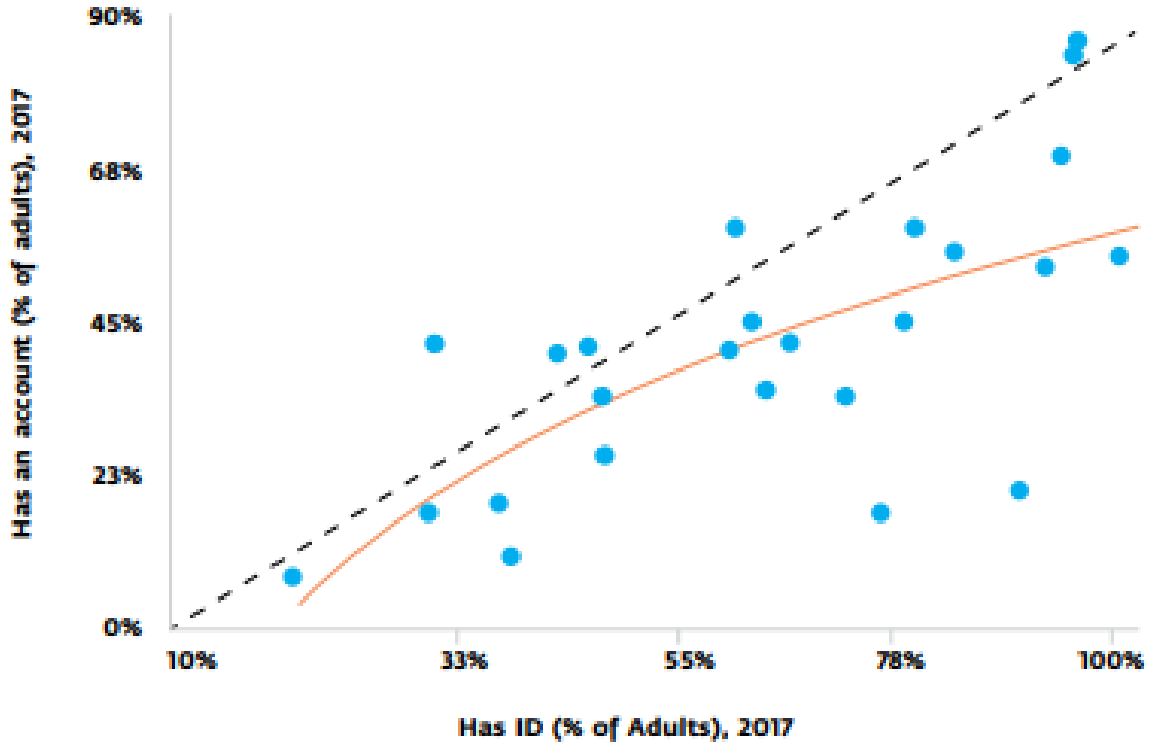
Broadly, Thingalaya, Moodithaya, and Shetty (2010) explain financial inclusion as fair and affordable access for all individuals to basic financial services. Likewise, financial inclusion is described as non-discriminatory access to formal financial services, especially for the underprivileged (Joshi, 2011; Allen et al, 2016).

An identity document is a small document in a standard credit card size form often provided by the central government to verify a person's identity (Quarmby, 2003). A person's information such as name, date of birth, residential address, photo, gender, citizenship, and number, among others, in the central database, is often connected to the identity document. Ownership of a national identity document is essential in financial and digital inclusion because several formal financial providers and mobile network providers (MNOs) demand an identity document to prove the identity of their customers (Arner et al, 2018). Furthermore, an identity card or national identification number (NIN) is required for all government services, including voting and other financial services such as opening bank accounts, registering for mobile money, accessing loans, and transferring property rights among others (Parliament of Uganda, 2015).

The 2015 Uganda Registration of Persons Act obligates all Ugandan citizens and non-citizen permanent residents to register for a national identity card. Within 6 months of the National Security Information System (NSIS) Project commencement, more than 16 million people aged 16 years and above were registered and about 14.8 million copies of the national identity card were issued by 2017 (NIRA, 2017). It should be noted that Uganda's population aged 16 years and above is over 20 million (CIA World Factbook, 2019) which leaves over 4 million citizens not registered and over 5 million citizens above 16 years who do not own a national identity card. The lack of a national identity card or national identification number (NIN) disproportionately affects the marginalized categories of the population such as children, low-income women, people with disability, rural-dwellers, migrants, and refugees which inhibits their access to basic public welfare services and socio-economic opportunities (World Bank, 2017). This could largely bear negative effects on financial inclusion.

International organisations have continuously acknowledged the importance of ownership of legal identity by individual citizens. As a point of fact, the United Nations General Assembly included ownership of identity into the Sustainable Development Goals (SDG 16.9) which requires all nations to issue legal identity to their citizens by 2030 (World Bank, 2015). From the 2017 Global Findex database and 2017 Identification for Development dataset, Klapper et al (2019) found a modest positive correlation between national ID ownership and financial inclusion amongst countries in Sub-Saharan Africa as shown in the graph below. This implies that opening an account generally requires identification. Additionally, Telenor (2012) reveals that a rise of 1% in financial inclusion correlates to a rise of 3.6% in GDP per capita growth. It is not surprising, then, that addressing the barriers to financial inclusion such as ownership of a national identity card in Uganda - especially for the unbanked and financially excluded, could lead to enhanced financial inclusion and economic growth in the country. This study seeks to examine the effect of ownership of national identity on financial inclusion in Uganda.

Figure 1: Graph showing the correlation between ID ownership and financial inclusion.



Note: The equilibrium 45-degree line is shown in black (dashed). The logarithmic trendline is shown in yellow. Source: Global Findex and ID4D data, available at https://globalfindex.worldbank.org

Source: Klapper et al (2019)

1.2 Problem statement

Identity and financial services intermingle as there is a growing need for increased security and know your customer (KYC) procedures in the ever-bulging digital world. The 2017 Global Findex Database reveals that Uganda's financial inclusion increased from 20% in 2011 to 59% in 2017 (Demirgüç-Kunt et al, 2018). This could be partly attributed to the massive issuance of the national identity cards to citizens in 2014 which helped lower barriers to account ownership (Handforth & Wilson (2019). Despite the improvements in financial inclusion, the Global Findex report indicates that 18.6% of the population above 15 years, especially women did not own a national identity in 2017 (World Bank, 2018a) yet KYC regulations are imposed on all mobile network operators, financial institutions as well as fintech, and even the non-profit organizations (World Bank, 2018b).

Furthermore, most of the literature on financial inclusion in Uganda has mostly focused on the determinants of financial inclusion, such as demographic factors, financial literacy and the links between mobile money and financial inclusion (Ondiege, 2015; Bongomin et al, 2018 & Akileng, Lawino & Nzibonera, 2018). There has been no attention paid to the effect of ownership of national identity on financial inclusion yet recent regulation mandates Ugandan citizens to own a national ID for SIM registration and access to financial services. This paper seeks to address the shortcoming in the existing literature by examining the effect of ownership of a national identity on financial inclusion in Uganda.

1.3 Purpose of the study

The aim of this research paper is to examine the effect of ownership of a national identity on financial inclusion in Uganda and make policy recommendations for broader national identity ownership to increase financial inclusion.

1.4 Objectives of the study

This study seeks to meet the following objectives:

1. To examine the effect of ownership of a national identity on financial inclusion in Uganda.
2. To analyse the influence of socio-economic factors on the relationship between ownership of a national identity and financial inclusion in Uganda.
3. To make policy recommendations for broader national identity ownership to increase financial inclusion.

1.5 Research questions

The following research questions guided this study:

1. What is the effect of ownership of a national identity on financial inclusion in Uganda?
2. What roles do socio-economic factors play in determining the relationship between ownership of a national identity and financial inclusion in Uganda?

1.6 Scope of the study

1.6.1. Thematic Scope

The study focuses on national identity ownership and financial inclusion in Uganda. It also investigates the influence of socio-economic factors on the relationship between ownership of a national identity and financial inclusion in Uganda.

1.6.2. Geographical Scope

The research study covers Ugandan citizens that are 15 years and above.

1.6.3. Time Scope

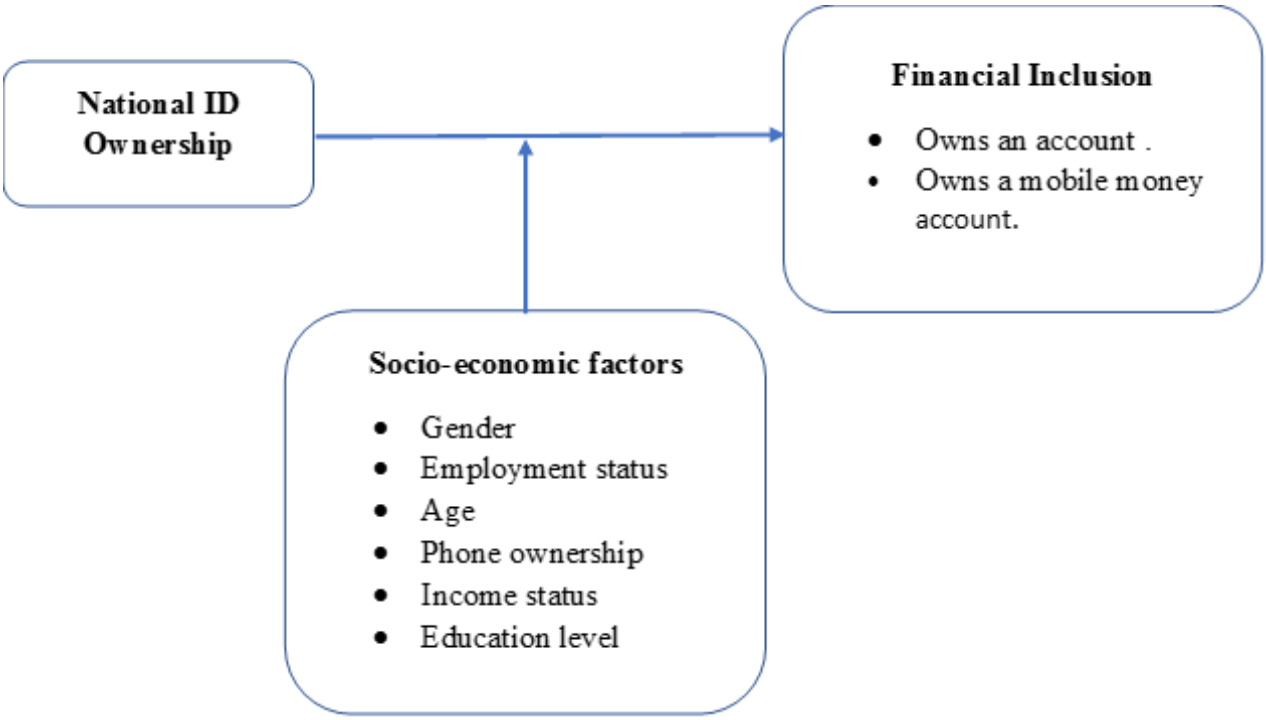
This study utilized the World Bank's 2017 Global Findex database.

1.7 Significance of the study

The study may offer institutional significance in the following ways:

1. To the Bank of Uganda (BOU), the financial institutions regulator, and National Identification and Registration Authority (NIRA), the study helps to address the effect of ownership of a national identity on financial inclusion and aids development of policies for broadening the identity ownership across vulnerable groups in order to increase financial inclusion.
2. To the financial institutions, and non-financial service providers, the study helps identify the influence of key socio-economic factors on the relationship between ownership of a national identity and financial inclusion in Uganda which if explored will enhance their sales and market share in the highly competitive sector.
3. To the academia, the study helps bridge knowledge and practice gaps for identity ownership and financial inclusion in developing countries. By so doing, it acts as a benchmark for using ownership of national identity for strengthening financial inclusion.

1.8 Conceptual framework



The conceptual model illustrates the relationship between national ID ownership and financial inclusion in Uganda. The socio-economic factors as listed in the model moderate the association between national identity ownership and financial inclusion in Uganda.

Almost universally, the lack of access to a means of identity has been proven as a main cause of financial exclusion in low-income economies. The 2017 Global Findex Survey reports that 26 percent of individuals in low income economies that do not own bank accounts mention scarcity of proper identity documents as the main hindrance (Demirgüc-Kunt, et al, 2018).

Empirical literature finds that socio-economic characteristics such as income level, education level, financial literacy, among others have negatively impacted the financial inclusion rate amongst households in Africa (Chakravarty & Pal, 2013; Chikalipah, 2017). On the other hand, Evans (2018) found that between 2000 and 2016, a greater level of ownership of mobile phones and access to internet has increased individual access to basic financial services. It appears that, in nearly two decades, financial inclusion in Sub-Saharan African countries has increased significantly due to the proliferation of mobile technology. Existing literature does not address the effect of identity ownership on financial inclusion and the magnitude of influence of the socio- economic characteristics.

1.9 Organization of the paper

The remainder of this paper is structured in this format: Chapter 2 conducts a review of the existing literature on ownership of national identity and financial inclusion. Chapter 3 discusses the research methodology, data sources, and data analysis employed. Chapter 4 highlights and discusses the results and finally, Chapter 5 makes policy recommendations and concludes.

2.0 Literature Review

2.1 Introduction

This section focuses on review existing literature on national identity ownership and financial inclusion. The literature review has been done in reference to the research objectives, that is; the effect of ownership of a national identity on financial inclusion, the influence of socio-economic factors on the association between ownership of a national identity and financial inclusion and strategies for broader national identity ownership to increase financial inclusion.

2.2 Effect of ownership of a national identity on financial inclusion

Uganda's National Security Information System identity card is a "biometrically enhanced, machine readable card with digitally embedded face scans and fingerprints of the card holder" (Ministry of ICT and National guidance, 2020, pg.1). In 2014, a program called the National Security Information System (NSIS) was launched, through which all Ugandans are registered and issued national ID cards with individually unique registration numbers. The project was launched to issue secure identification cards that enable Ugandans engage in social-political and economic activities such as voting and customer verification.

In February 2017, UCC passed a regulation that required all SIM owners to register or verify their SIM cards using National Identification cards or be switched off (Kanobe et al, 2017). However, as the national identification program was not yet complete, many citizens lost their access to digital financial services, especially mobile money and mobile banking which left them financially excluded.

Access to legal identification considerably influences access to basic financial services. Not only that, a lack of a means of identity could greatly hamper access to social welfare by vulnerable people in society such as rural women and poor farmers (Natarajan et al, 2018). The 2017 Global Findex Survey reports that 26% of low-income country residents and 19% of those in emerging economies, who do not have bank accounts, indicated not owning necessary documentation as the major barrier to their usage of financial services (Demirgüc-Kunt, et al, 2018). The situation is even more persistent in countries such as the Philippines, Zimbabwe, and Zambia with 45%, 35%, and 49% of people not owning necessary documentation. Notably, ownership of a national identity (ID) has increasingly become a crucial requisite for the adequate development of financial technologies such as mobile money registration, the opening of financial accounts, and access to micro-loans, among others which are all integral parts of financial inclusion (Yangdol & Sarma, 2019). An ID enables bank users to safely share their information with a third party. It also ensures the security of financial transactions and increases trust and usage of financial services.

GSMA (2019) noted that about 150 national governments mandate their citizens to obtain a means of identification as a prerequisite for mobile phone registration as of December 2018. It also estimates that more than one billion people globally do not have a recognised institutional means of identification and that as a result, a major proportion of the marginalized populations are likely to be excluded from accessing digital technology and essential financial services. This is due to the fact that as many countries undertake digital transformation, the phone is the major way of using the internet and financial services (GSMA, 2019). In India, Dhananjayand Bhattacharyay (2016) found that possession of the Aadhar card, a biometric identity card, was the most authentic identity proof required to register with a financial institution- including banks and to access government monetary provisions in the form of loans and subsidy.

In many cases, fintech companies and similar outlets providing technology-based services require people to verify their identities through recognised means such as national ID cards, before they could be granted access to such services. Tsai (2017) notes that authentication of transactions demands a certified identity issued by the government thus lack of identity excludes people from government financial services. There is no available empirical research on the effect of National identity ownership on financial inclusion therefore this study seeks to address this gap.

2.3 Influence of socio-economic factors on the relationship between ownership of a national identity card and financial inclusion.

The World Bank (2018) explains that in many low-income countries, women and girls are more affected by their inability to access legal means of identification, which in turn hampers their access to government financial services.

Furthermore, the 2017 Global Findex report shows that the likelihood of financial inclusion of females in low-income economies is 9 percentage points less than males and the likelihood of national ID ownership is 2 percentage points less than males (Demirgüc ̧-Kunt, et al, 2018). GSMA (2019) reveals that ownership of identity documentation among women could be a result of low perceived benefit, lack of awareness of identity-linked services relevant to women, and a lack of financial resources to provide these services. In a country, like Uganda, with the third-highest rate of female entrepreneurs in the world, owning a national ID would reduce the barriers to financial inclusion and would enable greater female economic participation (Handforth, & Wilson, 2019).

Research has established that those who do not have any means of official identification are commonly the rural poor at the lowest economic echelon of the society- causing them to face greater financial exclusion. (Gelb & Clark, 2013). Previous research on financial inclusion has established that socio-economic factors such as income, inequality, education level, urbanisation, and information are vital for financial inclusion (Ghosh, 2013; Ozili, 2018). Likewise, Kabakova and Plaksenkov (2018) reveal that socioeconomic factors in the absence of political development can influence opportunities of being included financially.

Zins and Weill (2016) studied data from the Global Findex database of 37 different African economies and found that to be a richer male that is highly literate and older had higher chances of being financially included. Similarly, Allen et al. (2016) used the 2012 Global Findex Database and found that the chances of financial inclusion are elevated for richer, more educated, older, and employed individuals. Furthermore, it is also revealed that women compared to men have higher chances of being financially excluded as a result of not owning identity documents (Demirgüç-Kunt et al, 2013).

Yet, these studies present findings that do not aid the magnitude of influence of the socio-economic factors on the relationship between ownership of national identity and financial inclusion. There is need for current analysis to identify the existing influence of the socio-economic factors on the relationship between ownership of national identity and financial inclusion in Uganda.

2.4 Strategies for broader national identity ownership to increase financial inclusion

Financial inclusion has been an interesting topic for policymakers and academicians because it is a vital policy approach to realising the sustainable development goals (Sahay et al, 2015), increases social inclusion (Bold, et al, 2012), aids in poverty alleviation (Chibba, 2009), and generates more social and economic advantages such as digitalization (Sarma and Pais, 2011). Advancing financial inclusion levels in a country requires the remarkable commitment of resources by policymakers. Zins and Weill (2016) stress the importance of policies in reaching some individuals, particularly those affected by financial exclusion and identifying their barriers. Large-scaled policies have attained the most significant performance towards financial inclusion for example universal ID ownership in India and Aadhaar accounts covering over1.2 billion citizens (Abraham, Sharma, and Panda, 2017).

Indonesia's financial inclusion strategy in particular has made use of various studies to incorporate national identity assessments with special focus on selected target groups such as the poor and different categories such as migrant workers, women, and rural dwellers (AFI, 2015).

2.5 Conclusion

This research endeavours to make a humble contribution towards filling some gaps in two strands of literature presented in this chapter: first, on the effect of ownership of a national identity on financial inclusion, and second on the influence of socio-economic factors on the links between ownership of a national identity and financial inclusion. Extant literature has demonstrated that ownership of a national identity bears a positive effect on financial inclusion and socio-economic factors such as gender, education level, employment and income status bear a moderating effect on financial inclusion. However, no study has been able to clearly state the influence of socio-economic factors on the links between ownership of a national identity and financial inclusion. Furthermore, most literature on strategies for increased financial inclusion focuses on financial education and literacy and little attention has been paid to ownership of national identity. This study attempts to fill the literature gap by exploring the effect of ownership of a national identity on financial inclusion, the influence of socio-economic factors on the association between ownership of a national identity and financial inclusion and strategies for broader national identity ownership to increase financial inclusion in Uganda.

3.0 Methodology

3.1 Introduction

This chapter presents the data sources, description of variables, and data analysis techniques that were used in the report.

3.2 Data sources

This research used the World Bank's 2017 Global Findex database to conduct the analysis. The 2017 Global Findex database draws from the survey conducted amongst 150,000 people in 144 economies. Gallup Inc. carried out the survey in 2017, surveying randomly selected 1000 people in 160 countries in more than 150 languages. Civilians above the age of 15 were targeted. In Uganda, the survey was conducted from July 19 to July 29 2017, using face-to-face interviews of 1000 participants in different languages such as Ateso, English, Luganda, and Runyankole.

3.3 Variables

The Global Findex database issues many financial inclusion variables and corresponding socio-economic characteristics of respondents. This research made use of the following key variables:

The dependent variable used was "Has an account" (% age 15+): Equal to 1 (0 otherwise) if the respondent has an account at a financial institution, a mobile money account, or both. The independent variable used was, "Has a national identity card" (% age 15+): Equal to 1 (0 otherwise) if the respondent has a national identity card.

The study also utilized the socio-economic characteristics of the respondents such as age, gender, education level, income quintile, employment status and phone ownership to moderate the relationship between the dependent and independent variables.

3.4 Data analysis

Data analysis was done using STATA to generate quantitative results for correlation and multiple regression tests. This study employed a logistic regression. Hussaini (2019) and Cohen, Cohen, Leona & West (2003) suggest that binomial logistic regression is the appropriate regression technique to use when the outcome variable is dichotomous or binary. Logistic regression is appropriate as no linear relationship between the outcome and predictor variables is needed, normal distribution of the error term is not required and no need for homoscedasticity (Hussaini, 2019).

Model specification

The regression equation for this research was as follows:

Financial Inclusion = f(National ID ownership, Age, Gender, Education, Income, Employment Status, Phone ownership, Socio-economic factors X National ID ownership)

$$Y = \beta_0 + \beta_1 \mathbf{X_1} + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 (X_{(2\text{-}7)} \times X_1) + \varepsilon,$$

Y = Financial Inclusion

β_0 = Constant

X_1 = National ID ownership

$(X_2 - X_7)$ = Age, Gender, Education, Income, Employment Status, Phone ownership

$X_{(2\text{-}7)} \times X_1$ = Socio-economic factors x National ID ownership

ε = Probabilistic error term

4.0 Results and Discussion

4.1 Introduction

This section presents the description and analysis of the variables used in the study and interpretation of the results. It further discusses the results according to objectives of the study and makes a comparison with the literature.

4.2 Data description

Table 4.1 presents descriptive statistics for the variables used in the study. Out of the 1000 participants, 63.1% were financially included, i.e. they owned an account at a financial institution or with a mobile money service provider. The national ID ownership variable indicates that 83.9% of Ugandans claimed to own a national ID in 2017. The majority of the respondents were aged below 30 years (54%) and female (57.9%). The data shows low levels of education with most of the respondents (51.6%) having completed primary or less.

The majority of the respondents were in the top 40% income level (46.6%) and 79.3% were in the workforce. The data shows a diverse image of Uganda's economic partakers consistent with the extant literature that reveals that 6 out of every 10 Ugandans adults are accessing formal financial services (Fsd Uganda, 2018; Demirgüç-Kunt, 2018).

Table 1: Descriptive Statistics

Variable	Frequency	Percentage	Std Dev
Financial inclusion (Has an account)	*1000*		*0.483*
Yes	*631*	*63.1%*	
No	*369*	*36.9%*	
National ID Ownership	*1000*		*0.368*
Yes	*839*	*83.9%*	
No	*161*	*16.1%*	
Phone Ownership	*1000*		*0.466*
Yes	*681*	*68.1%*	
No	*319*	*31.9%*	
Age	*999*		*14.151*
below 30 years	*539*	*54.0%*	
30 – 49 years	*325*	*32.5%*	
50 years and above	*135*	*13.5%*	
Gender	*1000*		*0.494*
Female	*579*	*57.9%*	
Male	*421*	*42.1%*	
Education level	*1000*		*0.508*
Completed primary or less	*516*	*51.6%*	
Secondary	*480*	*48.0%*	
Completed tertiary or more	*4*	*0.4%*	
Income Quintile	*1000*		*1.426*
Poorest 20%	*163*	*16.3%*	
Second 20%	*182*	*18.2%*	
Middle 20%	*189*	*18.9%*	
Fourth 20%	*206*	*20.6%*	
Richest 20%	*260*	*26.0%*	
Employment Status	*1000*		*0.405*
Out of workforce	*207*	*20.7%*	
In workforce	*793*	*79.3%*	

4.3 Correlation Analysis

The Pearson correlation coefficient was used to measure the strength between variables, and it lies between -1 to +1. A high correlation coefficient illustrates a strong linear relationship.

The results of the correlation analysis are presented below. It is evident that at 1% level of significance, there is a significant positive weak correlation between financial inclusion and all other variables except Age which is negative. Phone ownership and financial inclusion have the strongest linear relationship (0.41) out of all other variables suggesting a key role of phones in increasing financial inclusion, as most financial services in Uganda are offered on mobile.

There is a weak positive relationship between financial inclusion and national ID ownership (0.14). On the other hand, national ID ownership is correlated with phone ownership, age, and employment status. This is in line with a prior expectation.

Table 2 Correlation Statistics

	Financial inclusion	National ID Ownership	Phone Ownership	Age	Gender	Education level	Income Quintile	Employment Status
Financial inclusion	*1.000*							
National ID Ownership	*0.1387**	*1.000*						
Phone Ownership	*0.4059**	*0.1789**	*1.000*					
Age	*-0.0326*	*0.2319**	*0.0060*	*1.000*				
Gender	*0.1358**	*0.0319*	*0.1317**	*0.0404*	*1.000*			
Education level	*0.3227**	*0.0513*	*0.3028**	*-0.2014**	*0.1498**	*1.000*		
Income Quintile	*0.2681**	*0.0708*	*0.2521**	*-0.0829**	*0.1296**	*0.2467**	*1.000*	
Employment Status	*0.1361**	*0.0918**	*0.1375**	*-0.0287*	*0.0857**	*0.0584*	*0.1405**	*1.000*

**** - 1% level of significance***

4.4. Results

A binomial logistic regression was run to understand the effect of ownership of a national identity on financial inclusion and to observe the influence of socio-economic factors on the relationship between ownership of a national identity and financial inclusion. Odds ratios are the outputs for the logistic regression. Odds are the probabilities of financial inclusion divided by the probabilities of financial exclusion. Odds ratio is the ratio of the odds of financial inclusion for one group divided by the odds of financial inclusion for the other group. Odds ratio greater than one indicates higher odds of an event (financial inclusion) occurring in one group, e.g. female compared to another group, e.g. Male and vice versa.

Table 3 Logistic regression results

	Model 1	***Model 2***	***Model 3***
VARIABLES	*Odds Ratio*	*Odds Ratio*	*Odds Ratio*
National ID Ownership	*2.121****	*1.560***	*0.722*
	(0.000)	*(0.041)*	*(0.530)*
Phone Ownership		*3.95****	*3.698****
		(0.000)	*(0.001)*
30 – 49 years		*0.932*	*1.139*
		(0.692)	*(0.804)*
50 years and above		*1.069*	*1.268*
		(0.771)	*(1.819)*
Male		*1.281*	*0.842*
		(0.110)	*(0.661)*
Secondary		*2.594****	*2.293***
		(0.000)	*(0.032)*
Second 20%		*1.172*	*1.258*
		(0.536)	*(0.711)*
Middle 20%		*1.366*	*1.782*
		(0.200)	*(0.290)*
Fourth 20%		*1.854***	*0.905*
		(0.011)	*(0.857)*
Richest 20%		*2.614****	*2.197*
		(0.000)	*(1.131)*
In workforce		*1.472***	*1.009*
		(0.041)	*(0.983)*

National ID Ownership X Phone Ownership			1.116
			(0.795)
National ID Ownership X 30 - 49 years			0.805
			(0.699)
National ID Ownership X 50 years and above			0.859
			(0.886)
National ID Ownership X Male			1.626
			(0.243)
National ID Ownership X Secondary			1.177
			(0.704)
National ID Ownership X Second 20%			0.937
			(0.924)
National ID Ownership X Middle 20%			0.732
			(0.609)
National ID Ownership X Fourth 20%			2.322
			(0.171)
National ID Ownership X Richest 20%			1.244
			(0.714)
National ID Ownership X In workforce			1.65
			(0.302)
Constant	0.917**	0.140***	0.250***
	(0.010)	(0.000)	(0.001)
Pseudo R2	0.014	0.189	0.195
Prob. > chi2	0.0000	0.0000	0.0000
Observations	1000	995	995

P-values in parentheses
****** p<0.01, ** p<0.05, * p<0.1***
Constant estimates baseline odds

4.5. Discussion of the results

This section discusses the results in relation to the study objectives and makes a comparison with the literature.

4.5.1 Effect of ownership of a national identity on financial inclusion

National ID ownership is statistically significant in predicting financial inclusion at 1% level of significance (p =0.000). This implies that a Ugandan who owns a national ID has higher odds (2.121) of being financially included compared to one who does not own a national ID. After controlling for the social demographic factors, the odds ratio of being financially included when one owns a national ID is 1.56, i.e. the odds of financial inclusion with national ID ownership are 1.56 greater than the odds of financial inclusion without a national ID ownership. This result is statistically significant at 5% level of significance (p = 0.041).This is similar to Klapper et al (2019) findings that reveal in Sub-Saharan Africa, financial inclusion shows a tendency to rise as ownership of an ID increases and Demirgüç¸-Kunt et al (2018) findings in India that disclosed a rise in financial inclusion from 35 percent in 2011 to 80 percent in 2017 as a result of the government equipping a billion citizens with biometric identification. The result implies that a Ugandan with a national ID is 1.56 times more likely to be financially included compared to one without a national ID. This is in line with a prior expectation which is largely attributed to the regulation regarding SIM registration.

4.5.2 Influence of socio-economic factors on ownership of a national identity and financial inclusion

The results show that socio-economic factors reduce the magnitude of relationship between ownership of a national identity and financial inclusion by 0.56 times. With 95% confidence, national ID ownership (OR = 1.56, p = 0.041), phone ownership (OR = 3.95, p = 0.000), secondary education (OR = 2.59, p = 0.000), fourth 20% income quintile (OR = 1.85, p = 0.011), richest 20% income quintile (OR = 2.61, p = 0.000) and being employed (OR = 1.47, p = 0.041) significantly predict the likelihood of being financially included in Uganda. These factors positively predict financial inclusion with odds ratio greater than one, i.e., they increase the odds of being financially included.

The odds of being financially included are 1.56 times more with a national ID than without one, 3.95 times more with a phone than without a phone, 2.6 times more with secondary education than primary education, 2.61 times more in the richest 20% than bottom 20% income quintile, and 1.47 times more in the workforce than out of the workforce.

The findings of this study are similar to existing literature that finds that being male, older, richer, more educated, and employed leads to higher possibilities of financial inclusion (Fungácová et al, 2015; Allen et al., 2016; Yangdol & Sarma, 2019) however, the study findings differ from the literature when it comes to age and gender. Age and gender do not statistically significantly predict the likelihood of being financially included in Uganda.

Though not statistically significant, it is evident that an individual who owns a national ID, owns a phone and has a secondary school education, is in the richest 20% income quintile, and is in the workforce is more likely to be financially included compared to the same individual without a national ID.

5.0 Conclusion and Recommendations

5.1 Conclusion

Ownership of an individual and institutionally recognised means of identification is crucial to enable the integration of all citizens in the social services and every stratum of the economy. The literature has established that legal identification such as a National ID is essential in access to basic financial services. Out of the 14million adult Ugandans that are financially included, 56% have or use mobile money services which ride on a subscriber identity module (SIM) card (FsdUganda, 2018). However, in 2017, UCC regulation required Ugandan citizens to register and verify their SIM cards using their National IDs which hindered financial inclusion for those that lacked one (Kanobe et al, 2017).

Generally, this study argues Uganda can boost financial inclusion by harnessing ID ownership among the unbanked. Although more than 60% of the Ugandans are financially included, due to the regulatory restrictions (KYC regulation), national ID ownership could overcome the barriers to further financial inclusion. The results of the study reveal that national ID ownership is statistically significant in predicting the likelihood of being financially included in Uganda.

The study finds that the odds of financial inclusion of a Ugandan with a national ID are 1.56 times greater than the odds of financial inclusion of a Ugandan without a national ID.

The study further reveals that social and economic factors such as education level, income level, gender, age, phone ownership and employment status reduce the magnitude of the relationship between ownership of a national identity and financial inclusion by 0.56 times from 2.121 to 1.56. It concludes that with 95% confidence, national ID ownership, phone ownership, education, income quintile, and employment status statistically significantly predict the likelihood of being financially included in Uganda. These factors positively predict financial inclusion with an odds ratio greater than one, i.e., they increase the odds of being financially included. The study found that surprisingly, age and gender do not significantly predict the likelihood of being financially included in Uganda which could indicate no discrimination in terms of gender and age in Uganda's financial sector.

5.2 Recommendations

The study found that a person owning a national ID and owns a phone, has a secondary school education, is in the richest 20% income quintile, and is in the workforce is more likely to be financially included compared to the same individual without a national ID although it was not statistically significant. This implies that national ID ownership alone cannot increase financial inclusion, but national ID ownership policies should be integrated with other policies such as human capital development policies, increasing the income levels/GDP of individuals, increasing employment, and increasing phone ownership.

To enhance the financial inclusion through ownership of National ID, the study recommends the following:

1. The financial service providers such as banks, Mobile telecommunications operators, NGOs, government, etc. should encourage their potential clients to register for a national ID at their district offices through awareness campaigns and by offering discounted phones for those who register for a national ID. This will provide higher chances of financial inclusion.
2. The National Identification and Registration Authority should streamline the process of owning and replacing a national ID in Uganda. The time taken to own and replace a card should be reduced from months to a week by decentralizing the issuing powers to county levels and requiring less documentation. This will motivate citizens to own national IDs and increase the levels of financial inclusion by providing KYC identity requirements for financial account opening.

5.3 Areas of further research

The findings of this study were limited to the cross-sectional data in 2017 yet - at the time, Uganda had not completed the national identification program. Further research can be considered to use the updated data in 2020 and years ahead. Furthermore, a time series analysis of the data from each year of the Global Findex survey could be done in order to observe the evolution of the effect of national ID ownership on financial inclusion and changes in individual characteristics over the years.

References

Abraham, S., R. S. Sharma, and B. J. Panda, 2017, "Is Aadhaar a breach of privacy?" The Hindu, March 31, http://bit.ly/2BpbVyx.

AFI. (2015). National financial inclusion strategies: Current state of practice. AFI FISPLG publication. Alliance for Financial Inclusion. https://www.afi-global.org/sites/default/files/publications/fisplg-state_of_practice.pdf

Akileng, G. Lawino, M. & Nzibonera, E. (2018). Evaluation of determinants of financial inclusion in Uganda. Journal of Applied Finance & Banking, 8(4), 47-66. ISSN:1792-6599.

Allen, F., Carletti, E., Cull, R., Qian, J. Q., Senbet, L., & Valenzuela, P. (2014). The African financial development and financial inclusion gaps. Journal of African economies, 23(5), 614-642.

Allen, F., Demirguc-Kunt, A., Klapper, L. & Martinez-Peria, M.S. (2016). The foundations of financial inclusion: Understanding ownership and use of formal accounts. Journal of Financial Intermediation, 27, 1-30.

Arner, W. D., Zetzsche, A. D., Buckley, P. R. & Barberis, N. J. (2018). The Identity Challenge in Finance: From Analogue Identity to Digitized Identification to Digital KYC Utilities. SSRN Electronic Journal. 10.2139/ssrn.3224115.

Atkinson, A. and F. Messy (2013), "Promoting Financial Inclusion through Financial Education: OECD/INFE Evidence, Policies and Practice", OECD Working Papers on Finance, Insurance and Private Pensions, No. 34, OECD Publishing. http://dx.doi.org/10.1787/5k3xz6m88smp-en

Bold, C., Porteous, D., & Rotman, S. (2012). Social cash transfers and financial inclusion: Evidence from four countries. Consultative Group to Assist the Poor, No. 77, 1-28.

Bongomin, G. O. C., Munene, J. C., Ntayi, J. M., & Malinga, C. A. (2018). Analyzing the relationship between institutional framework and financial inclusion in rural Uganda: A social network perspective. International Journal of Emerging Markets, 13(4), 606-630.

Chakravarty, S. R., & Pal, R. (2013). Financial inclusion in India: An axiomatic approach. Journal of Policy modeling, 35(5), 813-837.

Chibba, M. (2009). Financial Inclusion, Poverty Reduction and the Millennium Development Goals. The European Journal of Development Research. 21. 213-230. 10.1057/ejdr.2008.17.

Chikalipah, S. (2017). What determines financial inclusion in Sub-Saharan Africa? African Journal of Economic and Management Studies, 8(1), 8-18.

CIA World Factbook. (2019). Uganda Demographics Profile 2019. https://www.indexmundi.com/uganda/demographics_profile.html

Cihak, M. & Singh, P. (2013). An analysis of national financial inclusion strategies. http://blogs.worldbank.org/allaboutfinance/analysis-nationalfinancial-inclusion-strategies.

Cohen, J., Cohen, P., Leona S. A., & West, S. H. (2003). Applied multiple regression/correlation analysis for the behavioral sciences. Hillsdale, N.J: L. Erlbaum Associates. ISBN 0-8058-2223-2.

Demirgüç-Kunt, A., Klapper, L., Singer, D. (2013). Financial inclusion and legal discrimination against women: Evidence from developing countries. (Policy Research Working Paper No. 6416). The World Bank, Washington, DC.

Demirgüç-Kunt, A., Klapper, L., Singer, D. (2017). "Financial Inclusion and Inclusive Growth: A Review of Recent Empirical Evidence." Policy Research Working Paper 8040, World Bank, Washington, DC.

Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution. Washington, DC: World Bank.

Demirgüç-Kunt, A., Klapper, L., Singer, D., Oudheusden, P. V. (2014). Measuring Financial Inclusion around the World. The World Bank, Washington, DC. http://pubdocs.worldbank.org/en/681361466184854434/2014-Global-Findex-Report-DKSV.pdf

Dhananjay, B., Bhattacharyay, B. N. (2016): Determinants of Financial Inclusion of Urban Poor in India: An Empirical Analysis, CESifo Working Paper, No. 6096, Center for Economic Studies and ifo Institute (CESifo), Munich

Evans, O. (2018). Connecting the poor: the internet, mobile phones, and financial inclusion in Africa. Digital Policy, Regulation and Governance, 20(6), 568-581

FsdUganda. (2018). Finscope Uganda. Topline Findings Report. https://fsduganda.or.ug/wp-content/uploads/2018/10/FinScope-Uganda-Survey-Report-2018.pdf

Fungácová, Z., Weill, L. (2015). Understanding financial inclusion in China. China Econ. Rev. 34, 196–206.

Gelb, A., & Clark, J. (2013). Identification for Development: The Biometrics Revolution. CGD Working Paper 315. Washington, DC: Center for Global Development. http://www.cgdev.org/content/publications/detail/1426862

GSMA (2019). Access to Mobile Services and Proof of Identity 2019: Assessing the impact on digital and financial inclusion. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/02/ProofofIdentity2019_WebSpreads.pdf

Handforth, C. & Wilson, M. (2019). Digital Identity Country Profile: Uganda. GSM Association https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/02/Digital-Identity-Country-Report-Uganda.pdf

Hussaini. B. (2019). Re: Can I perform mediation analyses using a linear probability model when both my outcome and mediator variables are dichotomous? Retrieved from: https://www.researchgate.net/post/Can_I_perform_mediation_analyses_using_a_linear_probability_model_when_both_my_outcome_and_mediator_variables_are_dichotomous/5ca26878aa1f096c026ada93/citation/download.

Joshi, D. (2011). The Financial Inclusion Imperative and Sustainable Approaches. Foundation Books. doi:10.1017/UPO9788175969216 Kabakova, O., & Plaksenkov, E. (2018). Analysis of factors affecting financial inclusion: Ecosystem view. Journal of business Research, 89, 198-205.

Kanobe, F., Alexander, P. M., & Bwalya, K., J. (2017). Policies, regulations and procedures and their effects on mobile money systems in Uganda. The Electronic Journal of Information Systems in Developing Countries. 83(7), 1-15.

Klapper, L., Ansar, S., Hess, J. & Singer, D. (2019). Sub-Saharan Africa series: Identification, financial inclusion, and development in Sub-Saharan Africa. World Bank. https://globalfindex.worldbank.org/sites/globalfindex/files/referpdf/FindexNote4_062419.pdf

Milton Ayoki (2009). Promoting Financial Inclusion in Africa: The Two Ambiguities. IPRA Working Paper 25 Institute of Policy Research and Analysis, Kampala.

Ministry of ICT and National guidance (retrieved on 19th July 2020). National Security Information System. https://ict.go.ug/projects-programmes/national-security-information-system/

Natarajan, H., Mandepanda, S. A. & Balasubramanian, S. (2018). G20 Digital Identity Onboarding. Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/362991536649062411/G20-Digital-Identity-Onboarding.

NIRA (2017) "Mass Registration of Pupils and Students". National Registration and Identification Authority, Republic of Uganda.

Ondiege, P. (2015). Regulatory Impact on Mobile Money and Financial Inclusion in African Countries - Kenya, Nigeria, Tanzania and Uganda, Centre for Global Development (CGD).

Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. Borsa Istanbul Review, 18(4), 329-340

Ozili, P.K. (2020). Financial inclusion research around the world: a review. Forum for social economics.

Ozili, Peterson. (2020). Financial inclusion research around the world: A review. Forum for Social Economics. 10.1080/07360932.2020.1715238.

Park, C. Y., & Mercado, R. (2015). Financial inclusion, poverty, and income inequality in developing Asia. Asian Development Bank Economics Working Paper Series, No. 426, 1-18.

Parliament of Uganda (2015). Registration of Persons Act, 2015, 54(1). https://www.parliament.go.ug/cmis/views/059330e5-12e4-4ca1-a08f-6b81fbfb4b60%253B1.0

Quarmby B (2003). The case for national identification cards. Duke Law and Technology Review 1, 1-10.

Sahay, R., Čihák, M., N'Diaye, P. M. B. P., Barajas, A., Mitra, S., Kyobe, A., & Yousefi, S. R. (2015). Financial inclusion: can it meet multiple macroeconomic goals? IMF Staff Discussion Notes, No. 15/17, 1-33. Washington, DC: International Monetary Fund.

Sarma, M., & Pais, J. (2011). Financial inclusion and development. Journal of international development, 23(5), 613-628.

Telenor (2012) Shaping our financial future: Socio-economic impact of mobile financial services https://www.telenor.com/wp-content/uploads/2012/03/Shaping-our-financial-future-final.pdf

Thingalaya, N.K.; Moodithaya, M.S. and Shetty, N.S. (2010). Financial Inclusion and Beyond: Issues and Challenges, New Delhi: Academic Foundation

Tsai, K. S. (2017). FinTech and Financial Inclusion in China. HKUST Institute for Emerging Market Studies, No. 20.

World Bank (2015). The world bank group support for the 2030 agenda for sustainable development. http://pubdocs.worldbank.org/en/648761485963736748/DC2015-0009-E-AgendaforSD.pdf

World Bank (2017). The state of identification systems in Africa. The World Bank, Washington DC.

World Bank (2017). The State of Identification Systems in Africa: Country Briefs.

World Bank (2018a) ID4D Country Diagnostic: Uganda. 2018 International Bank for Reconstitution and Development/The World Bank 1818 H Street, NW, Washington, D.C http://documents1.worldbank.org/curated/en/921761542144309171/pdf/132011-REVISED-PUBLIC-ID4D-Uganda-Diagnostic-12282018.pdf

World Bank (2018b). G20 Digital Identity Onboarding http://documents1.worldbank.org/curated/en/362991536649062411/pdf/129861WP-10-9-2018-17-26-21-GDigitalIdentityOnboardingReportlowres.pdf

World Bank (Retrieved on 11th July 2020). Identification for Development (ID4D) Data: Global Identification Challenge by the Numbers. from https://id4d.worldbank.org/global-dataset

Yangdol, R., & Sarma, M. (2019). Demand-side Factors for Financial Inclusion: A Cross-country Empirical Analysis. International Studies, 56(2-3), 163-185.

Zins, A., & Weill, L. (2016). The determinants of financial inclusion in Africa. Review of Development Finance, 6(1), 46-57.

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