

# ICT Usage, Mobile Money and Financial Access of Women in Ghana

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## ABSTRACT

*Women are the more disadvantaged and vulnerable compared to men, especially in Sub-Saharan Africa (SSA). Information and Communication Technologies (ICTs) and financial access to women are essential in enhancing economic growth and development. We used two datasets (Ghana Demographic and Health Survey and the World Bank Financial Inclusion) for the analysis. Descriptive statistics and econometric techniques (binary logistic as well as binary probit approaches) were used to examine both individuals' and households' access to ICTs and financial activities for Ghanaian women in comparison to men. The results, inter alia, show the likelihood of women having advantage in access to mobile phone as well as saving with mobile money. Thus, it is recommended that efforts should be geared towards the provision of mobile phones (and other ICTs) to women to help them to be financially included to achieve development.*

## INTRODUCTION

The financial sector in Ghana comprises formal financial institutions (e.g. banks), insurance companies, non-bank financial institutions, rural banks, cooperatives societies, savings and loans institutions. The Bank of Ghana (BoG) regulates the activities of the sector. Most Ghanaians are excluded from the formal financial sector (i.e. they are unbanked). The ratio of bank branches to Ghanaians stands at 5 to 100,000. Ghanaians are financially active as 67% save money, 65% own insurance, 40% invest money, and 10% borrow (InterMedia – Consultative Group to Assist the Poor, CGAP, 2015). Information and Communication Technologies (ICTs) can be used to achieve major objectives like economic equality, social mobility, democracy and economic growth (Bali Moune-Lutz, 2003; Vincze, 2016; Chimmun, 2017; Karakara & Osabuohien, 2017).

Financial inclusion entails access to financial products and services needed by all people in a society (including vulnerable people and low income groups) at an affordable cost and in a fair and transparent manner (Mol, 2014). Evidence is abundant that financial inclusion helps achieve growth and development in countries (Rajan & Zingales, 1998; Levine, Loayza & Beck, 2000; Osabuohien & Efobi, 2013). Thus, having access to ICTs could enable one to

participate and subsequently patronise financial services as Efobi, Beecroft and Osabuohien (2014) have noted that ICT inclination of households has positive and significant effects on the access to and use of bank services in Nigeria.

Women constitute 53% of the Ghanaian labour force, account for 44% of the gross domestic product (GDP), and comprise 70% of Ghana's Small and Medium Enterprises (SMEs), with many of them engaged in sales and marketing of petty products. However, women have limited access to formal financial services, such as: owning bank account, savings, digital payment methods, and insurance. Statistics show that 4 out of 5 Ghanaian women lack access to an account at a formal financial institution, compared to about 1 man out of 4 (InterMedia–CGAP, 2015).

The women have advantages in small transactions (loans, deposits, savings programs, insurance and other financial services, moneylenders or borrow from family members, where formal credit is not available). As most women are engaged in petty trading and as market sales persons, they lack the financial capacity and collateral to go for large volumes of transactions in the financial sector. Women easily form credit groups in markets, shops, residential areas, suburbs, and districts, such as: The Village Savings and Loan Association to enable them apply for loans from financial institutions (mostly microfinance institutions) and share the amount and payments to members of such group, hence, diversifying the risk. Many women have access to mobile phones, hence, to get women to be financially included; mobile money service should be rolled out to them. Mobile money serves the following purposes: payment of utility bills, buying goods and services, direct payments for loans/savings, buying of airtime and data bundles, sending and receiving of money, and depositing and withdrawing of money from a bank account. Other electronic payment services (e.g. e-zwich, Afric Xpress, eTransact Ghana) allow the loading and sending of cash, remittance transactions using phones, among other services, are available (Karakara & Osabuohien, 2017). In this paper, we argue that to achieve financial inclusion for women, there is the need to concentrate on mobile money for the number of reasons: the device is easy to use without much education for financial transac-

tion; mobile phones are widely used by women; it is fast in terms of sending/receiving money, among others.

Engaging women financially, would ensure development, wealth creation and economic empowerment in Ghana. SMEs are at the foundation of Ghana's economy, accounting for 70% of Ghana's GDP, and 92% of businesses inthe country. Within that context, women form 53% of the Ghanaian labour force, account for 44% of the GDP, and comprise 70% of Ghana's SMEs. About one third of formal firms in Ghana are female-owned, so access to finance by women will spur the contribution of women to the economic growth of the country.

### METHODOLOGY

We used two datasets, namely Ghanaian Demographic and Health Survey (GDHS VI, 2014) andWorld Bank Financial Inclusion 2014 to investigate how individuals as well as households have access to ICTs and finance. Descriptive statisticsof financial access and ICT access are used to present gender differences in access to financial activities and the ICTs. In addition, we estimateda binary logit and binary probit models of genderof individual as dependent variable and access to six different forms of finance as explanatory variables. The results indicate marginal effects at representative values (MER) where dummy explanatory variables are at their discrete values and continuous variables are at their means.

### RESULTS AND DISCUSSIONS

#### Results from DescriptiveAnalysis

Table 1 shows the descriptive of household access to ICTs. As can be observed,76.17% of the female headed households have access to a mobile phone compared to 85.08% of male headed households that have access to mobile phone. Also, 52.23% of female

headed households have access to radio set and 42.12% of female headed households owned a television (TV) set.

Figure 1 shows the proportion of males to females who have bank account registered in their name. From the Figure,we can infer that, out of the 3,002 respondents, 41.34% are women who have no bank account with a formal financial institution compared to 24.85% for men.

In addition, we computed the gender differences in access to different financial activities including access to mobile phone as reported in Table 2. Out of 943 respondents who save with a bank (or a formal financial institution), the women are made up of 49.52%, almost same as the men. Women save with the following means more than men; microfinance institutions, mobile money, informal institutions, family/friends, at home/safe-place and other means.We argue that to achieve financial inclusion, particularly for women, mobile money could be the most appropriate means. Women are 56% of those who own a mobile phone and 50.27% of those who save with mobile money. The roles of awareness, on the part the women and effective service delivery, on the part of the service providers, in promoting financial inclusion through mobile money cannot be overemphasized (George, Olayiwola, Adewole & Osabouhien, 2013).

#### Results from EconometricAnalysis

Table 3 shows that results from econometric analysis. The results show that, being a female reduces thechance of having mobile phone by 15% and having bank account by 16.6%significantly at 1% level. Being a female also increases the probability of saving with a microfinance institution by 8.2% and saving with an informal financial institution (like 'SUSU') by 17.5%.However, being a female reduces the likelihood of saving with Mobile Money by

Table 1: Descriptive Statistics on ICT and Financial Access in Ghana

Variables	Measurement	Response	Female Headed Household		Male Headed household	
			Percent	Obs.	Percent	Obs.
Financial access	Have bank account	Yes	39.25	1,502	51.61	4,133
		No	60.75	2,325	48.39	3,875
ICT access	Access to Internet	Yes	8.81	337	13.40	1,073
		No	91.19	3,490	86.60	6,934
	Owned Mobile Phone	Yes	76.17	2,915	85.08	6,813
		No	23.83	912	14.92	1,195
	Owned computer/tablet	Yes	7.63	292	13.90	1,113
		No	92.37	3,535	86.10	6,895
	Owned radio set	Yes	52.26	2,000	73.15	5,858
		No	47.74	1,827	26.85	2,150
	Owned T.V. set	Yes	49.12	1,880	56.78	4,546
		No	50.88	1,947	43.22	3,460

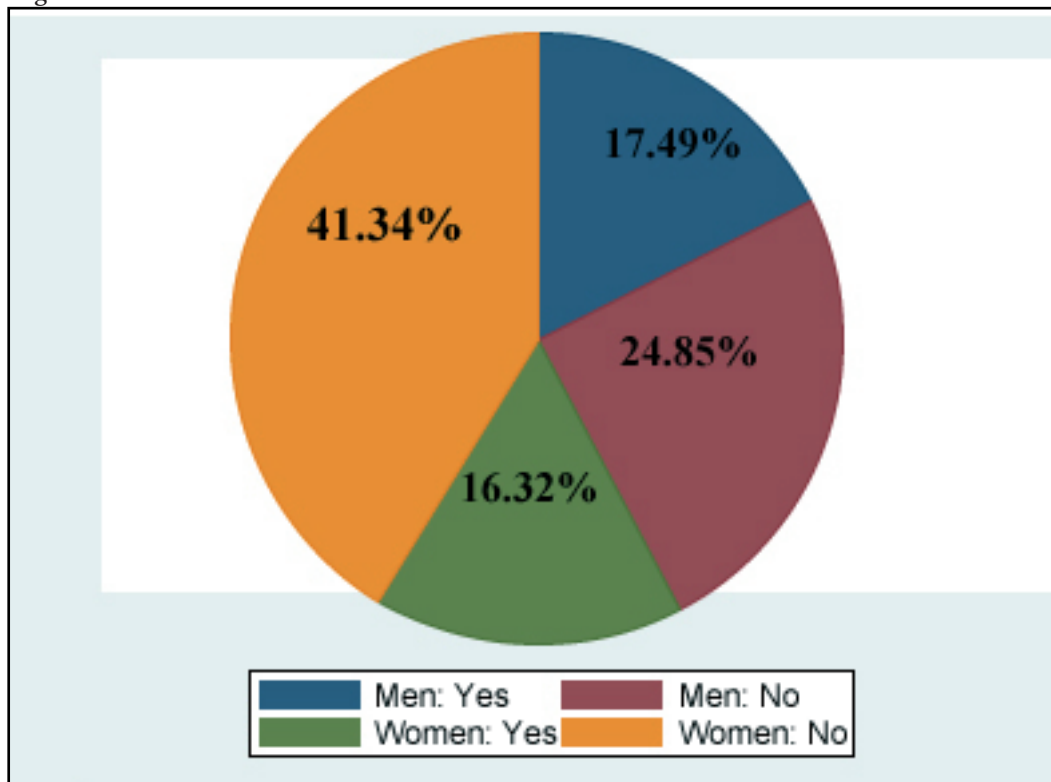
Notes: ICT: Information and Communication Technology; Obs: Observations  
Source: Authors' Computation based on GDHS data (2014)

5% and saving at home or a safe-place by 8.1%. We estimated the predicted probabilities to be between 0.29 to 0.88 for the logit model and 0.28 to 0.89 for the probit model. Thus, the probabilities of the explanatory variables are much strong as it falls between those probabilities values.

## CONCLUSION

This study has established that financial inclusion of women could be achieved more with mobile money. Using two different data-sets, the study has made some other salient findings that are surmised herein. Ownership of a bank account slightly differs for

Figure 1: Gender Differences in Access to Bank Account in Ghana



Source: Authors' computation based on World Bank Financial Inclusion Data (2014)

Table 2: Gender difference in access to different financial activities in Ghana (%)

Access to Finance	Response	Women (%)	Men (%)	Total respondents
Save with banks	Yes	49.52	50.48	943
	No	61.39	38.61	2,059
Save with Microfinance institutions	Yes	65.20	34.80	227
	No	57.05	42.95	2,775
Save with Mobile Money	Yes	50.27	49.73	374
	No	58.71	41.29	2,628
Save with informal institutions	Yes	76.27	23.73	177
	No	56.50	43.50	2,825
Save with Family/Friends	Yes	56.08	43.92	148
	No	57.74	42.26	2,854
Save at home/safe-place	Yes	52.01	47.99	796
	No	59.70	42.34	2,206
Save with other means	Yes	67.44	32.56	43
	No	57.52	42.48	2,959
Have a mobile phone	Yes	56.00	44.00	2,743
	No	57.66	42.34	259

Source: Authors' computations based on World Bank Financial Inclusion data 2014

**Table 3: Estimation Results (Dependent variable is Gender of respondent)**

Financial access	Logit		Probit	
Has a Mobile Phone (Yes)	-0.15*** (0.04)		-0.152*** (0.038)	
Has a Bank Account (Yes)	-0.166*** (0.049)		-0.173*** (0.047)	
Save with a Bank (Yes)	0.064 (0.04)		0.067* (0.041)	
Save with Microfinance (Yes)	0.082*** (0.03)		0.084*** (0.03)	
Save with Mobile Money (Yes)	-0.048* (0.028)		-0.049* (0.028)	
Save with Informal Finance (Yes)	0.175*** (0.04)		0.177*** (0.037)	
Save with Family/Friends (Yes)	-0.0074 (0.038)		-0.01 (0.039)	
Save at Home/Safe-place (Yes)	-0.081*** (0.026)		-0.084*** (0.024)	
Save at Other means (Yes)	0.057 (0.063)		0.058 (0.065)	
Predicted Probabilities	Min 0.29	Max 0.88	Min 0.28	Max 0.89

Note: standard errors are within brackets; \*\*\* and \* denote significance at 1% and 10%, respectively

Source: Authors' computation based on World Bank Financial Inclusion Data 2014

Ghanaian men (50.48%) and women (49.52%) denoting that when it comes to bank account ownership, gender disparity is not much a concern. Women, however, save more than men with microfinance institutions, mobile money, informal institutions, family/friends, at home/safe-place and other means.

Though being a woman in some instances reduces the chances of owning a mobile phone, it was found that more females owned mobile phones than men and more females use mobile money than men. Thus, policy makers can leverage on the mobile money platform in order to increase the financial inclusion of women and other associated positive development externalities. This finding therefore underscores that policies that are geared towards the provision of mobile phones (and other ICTs) for women should be pursued. Such phones could be given to them when it is already registered as a mobile money device. Financial literacy programmes should be organized for women to appreciate the need to be financially included.

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