Examining the Impact of Non-traditional Mobile Banking on Financial Inclusion in Ghana

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Objective

This study examined the use and impact of transformational mobile money on financial inclusion in Ghana. Mobile money services enable users to store value in an account accessible on the hand-set (the m-wallet), convert cash in and out of the account, and transfer value between accounts. Transformational mobile money involves the use of mobile phones to deliver financial services to the unbanked (Porteuos, 2006).

Significance

Literature on the pace of adoption and overall market potential of the mobile money industry in West African Countries is almost non-existent and previous studies indicate a low adoption rate in Ghana (Dzokoto & Appiah, 2014; Tobbin & Kuwornu, 2011). This study examined the use of mobile money for payments, remittance, and saving, separately, to identify the role of socio- economic factors and consumer perceptions on specific uses of the service. The results are therefore expected to provide important insights for innovation and integration in the financial sector, as well as regulation reform for inclusive financial policies.

Method

A total of four logistic models were estimated to test the research hypotheses using a sample of 280 survey respondents. The first three models examined the key determinants of using mobile money for payments, remittance, and saving, respectively. The final model compared non-users and multiple-service users to single-service users of mobile money. Each regression model uses a total of 20 variables representing the key constructs of the conceptual model.

Results

The results indicate that convenience and time saving were positively associated with the use of mobile money for remittance, whiles usefulness was positively associated with using mobile money for payments. The results also showed that compared to those who typically use mobile money for only one of the three services, non-users of mobile money did not have mobile money accounts, had higher incomes and did not consider the service to be time saving. Mobile money account owners who were more educated and considered the system to be secured were more likely to use two services as compared to the single-service users. Finally, account owners who were younger, more educated, and considered mobile money to be very useful as well as their only option for financial services were more likely to use all three services compared to the single-service users (Table 1).

Conclusions

This study found that socioeconomic factors such as age, education, and income to a much lower extent, play very important roles in the adoption of mobile money services. Mobile money usage is mainly driven by its usefulness with the remittance service appealing to lower income individuals, and the payments

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and saving use options to younger and more educated individuals. However, there are specific issues that require very careful considerations on the part of the service providers and regulators. First, there is the need for consumer education to improve awareness, and improved network capacity and security of the system. There is also the need for regulation to minimize the risk of fraud and protect the valuable savings of the poor, by providing some form of deposit insurance for float accounts. These measures will ensure high value for monetary transactions and stimulate consumer confidence in the system as well as improve usage rates.

Table 1
Non-use, Single-use and Multiple uses of Mobile Money

	Non-users				Two-service users				Three-service users			
Variable	Coef	S E	P>z		Coef	S E	P>z		Coef	S E	P>z	
Bank account	-0.182	0.744	0.807		0.296	0.592	0.617		0.644	0.686	0.348	
Proximity	-0.105	0.694	0.879		-0.208	0.428	0.627		0.438	0.500	0.381	
MM account	-1.925	0.611	0.002	**	3.323	1.093	0.002	**	2.484	0.875	0.005	**
MF account	0.290	0.658	0.659		-0.388	0.448	0.386		0.243	0.504	0.630	
Gender	0.797	0.592	0.179		0.093	0.389	0.811		-0.304	0.428	0.477	
Age	-0.266	0.272	0.328		-0.152	0.186	0.414		-0.549	0.230	0.017	*
Education	-0.376	0.303	0.215		0.487	0.204	0.017	*	0.726	0.228	0.001	**
Employment	0.104	0.412	0.800		-0.090	0.260	0.729		-0.414	0.285	0.147	
Marital Status	0.384	0.618	0.535		0.794	0.404	0.049	*	-0.075	0.474	0.874	
Income	0.597	0.286	0.037	*	-0.055	0.174	0.753		-0.092	0.197	0.640	
Convenience	-0.580	0.401	0.148		0.090	0.296	0.760		-0.222	0.319	0.486	
Time saving	-0.779	0.409	0.057	^	-0.154	0.303	0.611		-0.663	0.330	0.045	*
Usefulness	0.521	0.466	0.264		0.310	0.312	0.321		0.973	0.372	0.009	**
Ease of use	0.687	0.449	0.126		-0.105	0.276	0.705		-0.168	0.348	0.629	
Comfortable with use	-0.545	0.426	0.200		0.121	0.263	0.646		0.511	0.320	0.110	
Security	0.545	0.332	0.101		0.380	0.218	0.081	^	0.303	0.247	0.220	
Privacy	-0.363	0.317	0.253		-0.062	0.203	0.759		-0.230	0.235	0.329	
Confidence	-0.378	0.431	0.381		-0.380	0.277	0.171		-0.470	0.315	0.135	
Less expensive	-0.158	0.282	0.576		0.116	0.160	0.467		0.180	0.189	0.339	
Only option	-0.016	0.295	0.957		0.076	0.177	0.665		0.482	0.196	0.014	*
Constant	*2.063*	*2.563*	*0.421*		*-4.799*	*2.084*	*0.021*		*-4.699*	*2.196*	*0.032*	
Pseudo R2	**0.2393**											

*Note: ^ p<0.1 * p<0.05. ** p<0.01. *** p<0.001 (Base group = single-service users)*

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