



Cairo University



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# Socioeconomic Dynamics in Money Services in Egypt: an Empirical Analysis

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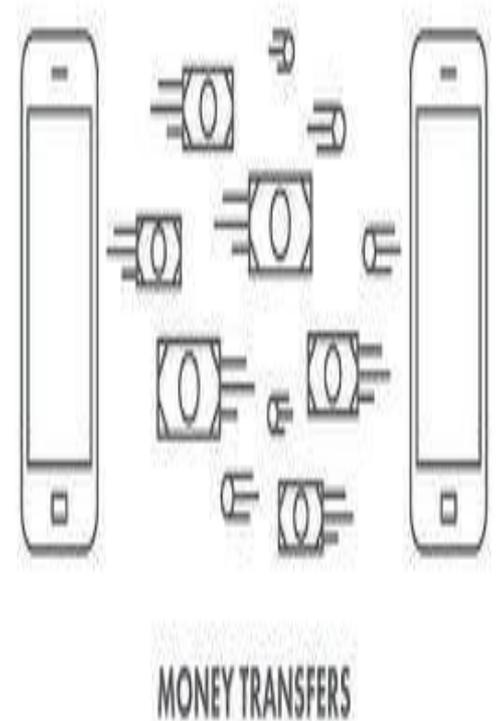
# Introduction-1

- MM services provide an **easy, cheap, simple, safe and secure method to transfer money using mobile phones.**
- The Mobile Money Model can be analyzed in the realm of an **emerging disruptive technology** in the form of **electronic payment technology solutions.**
- M-payments can be considered a disruptive technology in terms of providing a practical **solution for micro-payments challenges and money transfer related issues, that previously did not exist**



# Introduction-2

- The recent growth of mobile money in Africa, has allowed millions of people who are **otherwise disqualified from the formal financial system to perform financial transactions.**
- In Egypt, however, despite the fact that **mobile penetration rate amounts to almost 100%, mobile money services penetration rate is still quite low, around 1%** ( Global Findex Database W.B.), and more importantly, **with minimal impact on the Egyptian economy at large.**



# Introduction-3

- The present study adopts the approach of **consumer centric approach**, where “ A consumer-centric view” means that studies had focused on **characteristics** that matter to consumers, which may **help adoption studies**.
- I focus on investigating the **socioeconomic adoption factors of mobile money (MM) services in Egypt** using a Nielsen syndicated survey about the market size for retail banking in Egypt.
- This survey was conducted in **April 2015** on a sample of **953 mobile owners, reweighted using national statistics**.

# Motivation

- The profile of MM user in Egypt is still **vague**.
- Therefore, it is imperative to investigate the **socio-economic** factors that **shape this profile and affects the** decision to use mobile money services in Egypt.
- Many studies have tackled this research question in other African countries, **noticeably in Kenya**.
- However, there exists a **knowledge gap** in this domain in Egypt.
- The present study attempts **to close this gap**, and to provide some **policy recommendations** with the aim to increasing the penetration of this service in Egypt.

# Main Findings

- ✓ The **profile** of a mobile money user in Egypt is similar to the Kenyan counterpart: **affluent, university educated, and male user.**
- ✓ **Urbanization** plays **no role** in the socio-economic adoption factors controlled for in the estimated model.
- ✓ The **theory of early adopters is not evident** in Egypt's case
- ✓ **Beliefs about Islamic financial Rules do not contradict** with the adoption of MM services in Egypt.

# Definition of Mobile Money Services

- Mobile Money(MM) services are those financial services that require mobile phone to be completed. **Generally, they are defined as services in which mobile phone is used to access financial services (GSMA 2012).**
- While, "A mobile payment or m-payment is any payment where a mobile device is used to initiate, authorize and confirm an exchange of financial value in return for goods and services"(Au et al 2008)



# MM services in Africa ( a snapshot)

- It is **not uniformly distributed** in Africa.
- If we look at the **share of mobile phone subscribers who use mobile payments:**
- **In Kenya, 86 percent of all mobile phone users in the country are mobile money users in past 12 months i.e. to pay bills or send or receive money.**
- By comparison, **the share in all of Sub Saharan Africa is 23 percent** of the same indicator .(Demirguc-Kunt et al , 2012) .

# Egypt's Case Study

- In Egypt, with a **banking penetration rate at 10%** and **mobile penetration at about 100%**, it is clear that Egypt is ready for the new ecosystem of mobile money.
- CBE issued in 2010 the “Egyptian Regulations Governing Provision of Payment Orders through Mobile Phones”.
- According to the Egyptian Mobile Money Law, the **mobile money model is Mobile Network Operators (MNO) driven model**.
- The three mobile operators market players already **launched their mobile money services in 2013**
- There is a **cap** on the money transferred, for example, **the maximum wallet size is EGP 5000**, and Daily and Monthly **transfer limits** are around EGP **3000 and EGP 5000 a month**. (AmCham Egypt 2013 )

# The Role of CBE

- The MNO driven model entails **MNOs are accountable for regulatory compliance** including with CBE regulations as well as with other formal financial institutions.
- MNO is obligated to **hold mobile float in a bank.**
- Other models include the bank led model & Independent Model
- There is **no successful model per se.**

# MM Market Players in Egypt

Vodafone	MM Services in Vodafone	Affiliated Bank
<b>Name of MM Service</b>	<b>Vodafone Cash:</b>	<b>Housing Development Bank (HDB)</b>
<b><u>Type of MM services</u></b>	<b>1. Donations:</b> Donations for Magdy Yacoub Foundation, Food bank, 57357 Hospital and Misr Elkheir	
	<b>2. Money Transfer:</b> Transferring money to any Vodafone number with no deposit fees Withdrawing money with a EUR 0.3 fee for amounts between EUR 0.5 and 30 and a 1% of the withdrawal for any amount above L.E. 300	
	<b>3. Recharge and Bill Payment:</b>  <ul style="list-style-type: none"> <li>• The maximum amount per recharge transaction: EUR 20</li> <li>• The maximum amount per bill payment transaction: EUR 100. There are no fees on recharge or bill payment transactions</li> </ul>	
Etisalat	MM Services in Etisalat	Affiliated Bank
<b>Name of MM service</b>	<b>Etisalat Flous</b>	<b>National Bank of Egypt (NBE)</b>
<b>Type of MM services</b>	<b>1. Money Transfer:</b>	
	<b>2. Donations</b> Donations for National Cancer Institute, Food bank, 57357 Hospital and Misr Elkheir.	
	<b>3. Issuing a Temporary Internet Visa debit card:</b>  Issuing a temporary Internet Visa for one time use in 24 hours, with a fee of EUR 0.10 for every card issued.	
Orange	MM Services in Etisalat	Affiliated Bank
<b>Name of MM service</b>	<b>Orange Money :</b>	<b>Emirates NDB</b>
<b>Type of MM services</b>	<b>1. Money Transfer:</b> Transferring any amount to another Orange number with a EUR 0.1 fee. Withdrawing money with a EUR 0.3 euro fees for amounts between EUR 0.5 and 15 and a 2% of the withdrawal for any amount above EUR 15.	
	<b>2. Bill payment</b>	
	<b>3. Recharging.</b>	

# The Role that Socio-economic factors play in adopting mobile money services

- They are considered an **interesting and necessary** research topic in the **area of m-applications** and conversion as well.
- The most important adoption factors for mobile payment services seem to be
  - **socioeconomic factors such as income, gender, and region(urban /rural).**
  - **ease of use,**
  - **trust and security,**
  - **usefulness,**
  - **cost,**
  - **compatibility,**

Consumer characteristics and factors reflecting: **registration requirements , and cost of transactions** are of great significance in adopting this service (Dahlberg et al 2008).

# Socioeconomic factors & financial services adoption

- **Gender**: In Africa, **men are more likely than women** to have an account at a financial institution though the gender gap is relatively small compared to other regions.
- **Income** : Adults in **high income brackets** are almost four times as likely to have a **formal account** as those in the low income, on average.
- **Education& age** : Similarly, adults with a **tertiary** education and those **ages 25-64** are particularly likely to report having an account at a **formal financial** institution. ( Demirgüç-Kunt et al 2012)
-

# The cost of banking services in Egypt

1. The **cost of banking services** compared to the low cost of mobile money transfer services is **considerably high**.
  2. Other reasons: **banks are too far away**.
  3. **Required documentation** is also a reason for not having one.
  4. **Women** tend to report **using someone else's account** significantly more than do men, highlighting the challenges that women may encounter in account ownership.
- Whether in response to these barriers or for other reasons, many **people use informal methods** to save money or make payments as an alternative or complement to formal banking.
  - Informal savings clubs such as (Rotating savings and credit associations **(ROSCA)**).
  - **Mobile money** another popular example that operate outside the traditional banking sector, made possible by the rapid spread of mobile phones.

# The costs associated with opening a bank account in public and private banks in Egypt—not affordable

Name of the bank	Public Banks	Name of Bank	Private Banks
<b>NBE</b>	Current Account: Opening fees EUR 8.3 with a EUR 1.20 annual fee for the account and EUR 2.5 annual fee for the Visa Card, You should deposit a minimum of EUR 50 to open the account.	<b>Bank of Alexandria</b>	El Masry Current Account: Opening fees EUR 0 and EUR 0 for issuing the Visa with a EUR 5 annual fee for the account and a EUR 3 annual fee for the Visa Card, You should deposit a minimum of EUR 100 to open the account.
<b>Banque Misr</b>	Current Account: Opening fees EUR 4.5 and EUR 1.5 for issuing the Visa with a EUR 10 annual fee for the account and EUR 1.5 annual fee for the Visa Card, You should deposit a minimum of EUR 100 to open the account.	<b>Arab Bank</b>	Current Account: Opening fees EUR 3.8 and EUR 5 for issuing the Visa with a EUR 15.6 annual fee for the account and a EUR 5 annual fee for the Visa Card, You should deposit a minimum of EUR 1,000 to open the account.
<b>anque du Caire</b>	Current Account: Opening fees EUR 2.5 and EUR 2.5 for issuing the Visa with a EUR 12 annual fee for the account and a EUR 1.5 annual fee for the Visa Card. You should deposit a minimum of EUR 100 to open the account.	<b>Qatar National Bank (QNB)- AlAhli</b>	Current Account: Opening fees EUR 3 and EUR 4 for issuing the Visa with a EUR 10 annual fees for the account and EUR 4 annual fee for the Visa Card, You should deposit a minimum of Euro 250 to open the account.

Table 2 below reflects

- The public banks fees for opening an account including the minimum deposit requirement, **which is required to transfer money using the bank services, are higher in private banks compared to public banks, with the exception of Alex Bank.**
- The **high level of required minimum balance** to use banking services i.e. **not affordable**, is one of the many reasons cited for not having a bank account.

# 3. Literature Review

- At the outset, there is a consensus among policy makers and practitioners to **consider the Kenyan M-Pesa case study a successful model** for mobile money transfer services not only in Africa but globally.
- Thus it is **imperative** to investigate and analyze this success story of MM services in Kenya, in order to understand its
  - ✓ **its economic impact,**
  - ✓ **users profile**

# M-PESA

- Mobile money services are **prevalent** in developing countries compared to developed countries.
- In addition the idea of “**crossing the chasm (gap)**”, where **early adopters in urban areas** adopt this new technology and literally export it to their hometown **family members in rural areas**.
- Overcoming **challenges such as illiteracy** by using **homogenous** mobile phones such as the **basic Nokia phone** helped effectively in the increased uptake of MM services in **Kenya**.

# M-PESA

- **M-PESA** was defined as an agent-assisted, mobile phone-based, person-to-person payment and money transfer system, that **was launched in Kenya on March 6, 2007, by Safaricom** (Mbiti 2011).
- In 2014, there were around **73.9 million mobile money transactions in volume**. This number of mobile money transaction in value in 2014 has increased exponentially to reach \$192.6billion.
- Number of active **mobile money costumers amounted to 12.5 million in 2014**, where adults constitute about 60 % of the service users. (GSMA 2015).

# M-PESA ( Economic Impact)

- **The economic impact of M-Pesa** (Morawczynski, O. (2011), Plyler, et al ( 2010):
  - ✓ **the economic outcomes of community members**
  - ✓ **local economic expansion, and rural development**
  - ✓ **security,**
  - ✓ **capital accumulation and business environment** (after 2.5 years of using M-Pesa in these communities. )
- These effects were influenced by **gender and geographic location of the communities ( urban/rural).**
- M-Pesa **revolutionized** the way business is done and provided the basis for **new business models** that suits the **idiosyncratic context of African countries.**

# M-PESA (socioeconomic factors)

- More importantly, Ngugi et al (2010), discussed and identified **the key factors that resulted in the emergence and success of M-Pesa.**
- The authors used both **secondary and survey data** targeting mobile phone users who were most likely **young affluent and live in urban areas.**
- The authors applied the **Technology Acceptance Model(TAM)** as the theoretical framework for their study.
- **They concluded that early adopters of the new technology of mobile money transfer are those young urban residents.**
- In addition the idea of “**crossing the chasm (gap)**”, where **early adopters in urban areas** adopt this new technology and literally export it to their hometown **family members in rural areas.**

# M-PESA

- Mbiti (2011), used **data from the 2009 FinAccess survey** to examine basic patterns and characteristics of M-Pesa users and their usage patterns.
- The likely profile of M-Pesa users includes a younger, wealthier, better educated, banked, employed in non-farm sectors, male , who is an owner of a cell phone and lives in urban areas.
- There is a high correlation between having a bank account and using the M-Pesa services in Kenya.
- The higher the socio-economic status of the user the more likely that he would use the M- Pesa services.
- So this cohort is more likely to reap the benefits of such savings from using the M-Pesa.( Mbiti - 2011)

# 4. The Empirical Study

- The data necessary to conduct an empirical analysis in this domain was **primary data** obtained from a survey administered by **Nielsen** as part of their **syndicated study about the market size for retail banking in Egypt**.
- The survey is the source for the sample that is representative of the population at the governorate & secondary level, yet skewed towards male urban population. **The data was re-weighted using national statistics.**

# Data Analysis

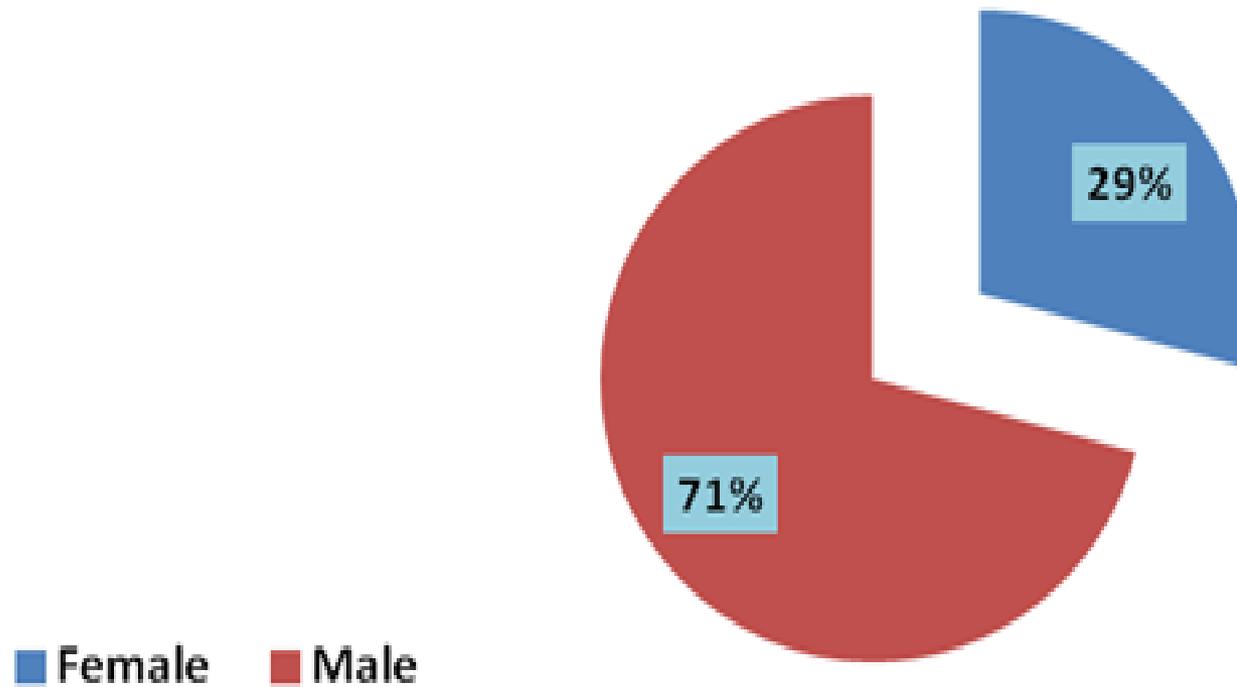
Preliminary data analysis show the following stylized facts about mobile money users:

- ✓ Among those who have **mobile phones**, only **12 % use their mobiles for mobile money services**. Majority of the mobile money users are **males** (71%) compared to (29%) only females.
- ✓ Mobile money users are characterized by having **high incomes** around **5.5%** of users of mobile money are in the income **bracket 10,000-39,999 Egyptian pounds**. (\$1,250-\$5,000)
- ✓ **97.4% of MM service** users have at **least one banking product** and just 2.6% don't have any form of bank accounts.
- ✓ With respect to the **most popular MM service operator** in our sample, 55% of MM users use **Vodafone cash**, this is followed by 23% using mobi Cash of mobinil and 5% using Etilalat Flous service.

# Data Analysis ( Qualitative data)

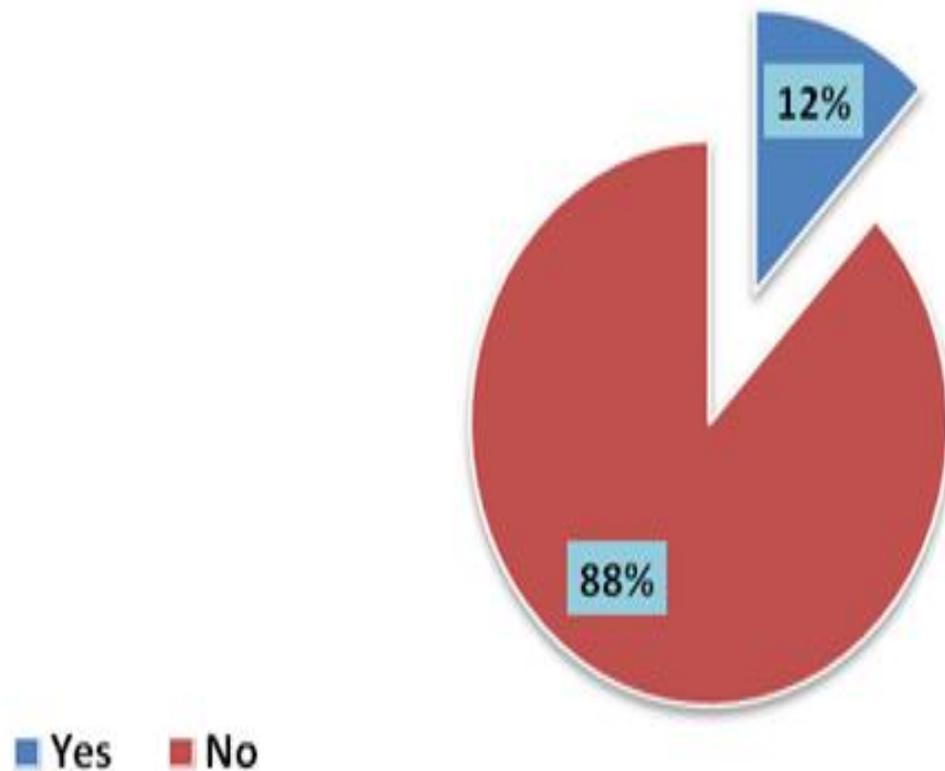
- ✓ The motivation of MM users to use this service, is for the purpose of **transferring money to relatives (61%) or withdrawing money from relatives (21%), or finally transferring money for business purposes.**
- ✓ The **main benefits** reported by users of MM **is faster service as well as ease of use.**
- ✓ This is followed by the monetary benefits of being a **cheaper** service compared to the conventional banking service.
- ✓ Interestingly, though , users of MM usually **have customer loyalty** to this service where the majority of respondents (63%) don't use other services to transfer money, while 37% do use other money transfer services.
- ✓ Furthermore, most of the respondents emphasized that MM services **are not contradicting with beliefs about Islamic financial rules.**

# Gender



source: Nielsen syndicated study 2015

## Have you used mobile money transfer?



source: Nielsen syndicated study 2015

# 5-Conclusion

- ✓ The present study reaches the **findings** that the profile of a mobile money user in Egypt is **similar to that of Kenya**, namely an **affluent, university educated, and male user**.
- ✓ However, the **theory of early adopters is not evident** in Egypt's case.
- ✓ **Urbanization plays no** role in the socioeconomic adoption factors controlled for in the estimated model.
- ✓ The empirical model also shows that according to the survey **beliefs about Islamic financial rules do not contradict** with the adoption of MM services in Egypt.

# 6. Policy Recommendations-1

- Obstacles include **lack of information & awareness** about this new service, its mechanism and its benefits for users.
- Reaching out to the **bottom of the pyramid** with new **innovative business models** remains the challenge for both the **regulator** and the mobile operators.
- Reaping both the economic and social benefits of mobile money services in Egypt is crucial for achieving the goal of financial inclusion .
- **The lack of support and understanding** of how it could be a solution for the financial inclusion challenge in Egypt. Regular users cite speed and ease of use and value for money as the leading factors that have made them regular users — underscoring the importance of service convenience.

# Policy Recommendations-2

- Other important factors to address are **greater confidence in privacy and security can drive mobile payments uptake**(E&Y, 2013).
- In addition, it is important to foster an **enabling regulatory environment** for the mobile network operators and to encourage them to **increase their investments in infrastructure and technology** of mobile money services in Egypt.
- This stresses the role of the regulator in promoting mobile money services in Egypt.

# Lessons learned from the Kenyan Experience

- Drawing from the Kenyan experience, initially the **Central Bank of Kenya (CBK) did not interfere** in the launch of the M- Pesa service.
- In August 15th , **2014**, The Kenyan's regulator issued the National Payment Systems Regulations (NPS), with the main aim to **protect privacy and confidentiality the consumer of M-Pesa.** ( Alliance for financial inclusion 2009)
- CBK has now a **functional role rather than institutional one**, where for example a Payment service Provider Management Body was introduced to **clearing of mobile money transactions and it is also meant to serve as a channel of communication between the CBK and the MNO.**( GSMA 2014).

# Lessons learned from the Kenyan Experience

- Mobile money services on **Kenya** include peer-to-peer (P2P) transfers, bill payments, and merchant payments, **social disbursements** , and **international remittances**.
- Furthermore, M-PESA users are permitted to **withdraw cash** from **Pesa Point ATMs** regardless of whether they were banked, effectively making the **ATMs virtual mobile money agents**.( GSMA 2015).

# Policy Recommendations-4

- In the **Egyptian case**, however, using mobile money to send **remittances** from overseas, is prohibited and **not allowed** by the governing law.
- Altogether, these findings indicate that **operators** seeking to succeed in the mobile money marketplace must **meet** changing customer needs in a convenient, relevant and cost-effective way through a planned expansion of mobile payments and related services in the respectful country's context.

# Policy Recommendations-5

- New business models that suit the idiosyncratic context of each African country are required and remain a challenge to the operators.
- However, MNO have to solve other challenges such as changing market conditions, such as technological change, new competitors, or new policies.
- **Suggested innovative schemes include joint ventures with other industry actors, which will help operators not only to devise and deliver new services but also to incubate and develop new competencies(E&Y, 2013).**

# Update on Mobile Money Regulations in Egypt

Recently, on March 7<sup>th</sup> 2016, the CBE amended some of the regulations governing MM transfers in order to permit the transfer of remittances using mobiles among family members or for Business. The amendments are targeting the low income workers abroad whose relatives or partners in Egypt must establish a MM account with an operator and the governing rules are those for transferring money through the bank.

Operators are considered agents for the bank. The customer must have either low cost bank account with the affiliated bank or a pre paid account with a maximum amount for transfer is 5000 EGP



**Thank you for your attention!**

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# Additional slides

# Logistic Regression Output

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>						
Recoded_Gender(1)	.414	.248	2.792	1	.095	1.512
Islamic_Beleifs(1)	.202	.235	.740	1	.390	1.224
Monthly_Income			19.016	4	.001	
Monthly_Income(1)	.091	.408	.049	1	.824	1.095
Monthly_Income(2)	.776	.303	6.560	1	.010	2.172
Monthly_Income(3)	1.243	.329	14.249	1	.000	3.468
Monthly_Income(4)	1.716	1.259	1.857	1	.173	5.560
Educ_Dummy	1.543	.626	6.080	1	.014	4.680
Region_Recoded(1)	.774	1.083	.511	1	.475	2.168
Constant	-5.210	1.253	17.295	1	.000	.005

a. Variable(s) entered on step 1: Recoded\_Gender, Islamic\_Beleifs, Monthly\_Income, Educ\_Dummy, Region\_Recoded.

# Results of Logistic Regression-1

- With respect to the **gender** coefficient , It was statistically significant, and it interpreted as the **odds of using MM services among males is about 1.5 times** compared to the odds of using MM services among females holding other variables constant .
- In general the **income** estimated coefficient was statically significant, where the **odds of using MM services among those whose monthly income ranges from (10,000 to 39,999) is about 2.2 times** compared to the odds of using MM services among those whose monthly income ranges from (1,000 to 2,999) holding other variables constant.

# Results of Logistic Regression-2

- Furthermore, the odds of using MM services among those whose **monthly income is 40,000 and more** is about **3.5 times** compared to the odds of using MM services among those whose monthly income ranges from (1,000 to 2,999) holding other variables constant.
- **Education** was highly statistically and economically significant, where the odds of using MM services among those with **university education is about 4.7 times** compared to the odds of using MM services among those without university education holding other variables constant.
- However, the **urbanization factor as well as the contradiction between beliefs about Islamic financial rules and MM services turned out to be statistically insignificant.**

# Results of Logistic Regression-1

- The cut off points for this model was changed to 0.12, from 0.5%, since the percentages of MM services (Mobile Money Services) users and non-users are not close to each other. The percentage of users is 12% which affects the model classification. **Stepwise regression was used.**
- The final model containing the following independent variables (Gender, Contradicting Islamic Beliefs, Monthly Income Category, Education Level, Region).

# Results of Logistic Regression-2

- The significance of the model as a whole is significant at 5% significance level. Bearing in mind the reference categories as mentioned in the previous table.
- The model classified about 57% of those who don't use MM services as non-users and also it **succeeded to classify 73% of MM services users as users which means that the model was better in classifying users than non-users.**
- The overall percentage of correct specification is 59% of sampled respondents , which is more than 50% of sample size, **hence our model fits the data well and prediction power is good.**