STORING AND TRANSFERRING MONEY IN A CASH-STRAPPED FISHING MUNICIPALITY IN THE BICOL REGION

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1. Project Abstract

The Bicol Region is among the poorest of the 17 regions in the Philippines. It was ranked fourth poorest in the first semesters of 2006 and 2009. With 34.1% of the region's population living in poverty during the first six months of 2012, the Bicol Region has become the seventh poorest region in the country. Camarines Sur is among the poorest of the six provinces of the Bicol Region. With 33.5% of the population living in poverty in 2012, it ranked third poorest to the Masbate and Albay regions (National Statistical Coordination Board, 2013). It is in the foregoing observations that Garchitorena, one of the poorest municipalities in Camarines Sur, was chosen as the study site. This investigation will examine the variables, conditions and processes of mobile money transfer and storage among the poor fishing households in the poorest town of the Bicol Region in the Philippines. It specifically aims to: (1) describe the socio-economic profile of the selected fishing households; (2) explore the processes and nature of mobile money transactions of fishing households in their daily household and livelihood activities; (3) determine the factors that influence their engagement in mobile money transfer and storage; and (4) identify possible interventions of local policy makers and industry developers in expanding the potential of mobile money as a tool for financial inclusion of the poor fishing households.

Toward these ends, the research identified the socio-economic variables that influence the engagement of poor fishing households in mobile money transfer technology. Positive variables include the level of education attained by fishing household heads, the level of household

income, the size of the fishing households, and the amount of household expenses. Possible interventions suggested by the study were the expansion of network coverage by telecommunications corporations; infrastructure support from the local government as well as security and safety protocols for these infrastructures; inclusion of mobile money services in the basic services provided by local government at the barangay (village) level; and raising the ceiling-amount of mobile money transactions.

In sum, the study suggests that through an understanding of the link between the households' socio-economic condition and their participation in mobile money, the forms of value storage and exchange media that have the potential to be transformative in their lives can be identified and implemented.

2. Introduction

The Bicol Region is among the poorest of the 17 regions in the Philippines. This is according to the National Statistical Coordination Board (NSCB), a policy making and coordinating body on statistical matters under the auspices of the Philippine government. While poverty in the Bicol Region went down from 36.5% in 2009 to 34.1% in 2012, the decrease cannot be considered statistically significant. Among the 17 regions in the country, only two regions posted statistically significant decreases in poverty incidence, i.e. Caraga Region, between the first semesters of 2009 and 2012, and Ilocos Region between 2006 and 2009.

In terms of poverty incidence among the population, there were around 43 poor for every 100 Bicolanos during the first semester of 2012, or about two poor individuals less than the previous number in 2009. The annual per capita poverty threshold stood at about USD205, the fifth lowest among regions in the country. This USD205 threshold means that a family with five

members would need about USD1,025 during the first semester of 2012 or USD170 monthly to provide for basic needs (National Statistical Coordination Board, 2013).

Food poor or extremely poor families consistently dropped from 16.5% in the first semester of 2009 to 14.1% in first semester of 2012. Similarly, food poor population posted consistent declines from the first semester of 2006 to the first semester of 2012. The Family Income and Expenditure Survey (FIES) data of the National Statistics Office (NSO) provided this information.

As shown in Table 1, Camarines Sur is among the poorest of the six provinces of the Bicol Region. With its poverty incidence of 33.5% in 2012, it ranked third poorest to Masbate with 44.2% and Albay with 36.1% (National Statistical Coordination Board, 2013).

Table 1. Poverty incidence, Philippines, Bicol and its six provinces, 2006, 2009, 2012

Province	*Poverty incidence (%)*		
	2006	*2009*	*2012*
Philippines	23.4	22.9	22.3
Bicol Region	36.2	36.5	34.1
Albay	32.3	33.9	36.1
CamarinesNorte	29.5	32.4	24.7
Camarines Sur	38.7	37.2	33.5
Catanduanes	31.2	20.3	27.1
Masbate	47.8	49.8	44.2
Sorsogon	30.6	34.3	32.1

Based on Table 2, which shows income class in Bicol, Camarines Sur is the largest province in Bicol in terms of total number of districts, municipalities, cities and barangays. Moreover, Camarines Sur has been classified as a first income class province, together with Albay and Sorsogon. It has two cities, which may make its municipalities physically closer to centers of trade and commerce than Masbate and Sorsogon with only one city each, or

CamarinesNorte and Catanduanes with no city at all (National Statistical Coordination Board, 2013).

Table 2.Income class of the provinces of Bicol, 2013.

Province	*Number of district*	*Number of municipality*	*Number of city*	*Number of barangay*	*Income class*
Albay	3	15	3	720	First
CamarinesNorte	1	12	0	282	Third
Camarines Sur	5	35	2	1,063	First
Catanduanes	1	11	0	315	Third
Masbate	3	20	1	550	Second
Sorsogon	2	14	1	541	First

Although many households in Camarines Sur are below the poverty threshold, the province has high potentials for improvement given its human and natural resources and its size in terms of number of barangays, cities and municipalities. It likewise receives a relatively big slice from national government funds, and possesses financial capability to set up infrastructures for its development as a province.

Statement of the Problem

Given the foregoing observations, Garchitorena, one of the poorest municipalities in Camarines Sur, was chosen as the study site. This investigation explored how a poor and coastal municipality in the province of Camarines Sur in the Bicol Region were relating to the evolving mobile money platforms and policies. With particular focus on the poor fishing households, this study probed whether these households were involved in mobile money transfer and storage and how old practices of money payments and receipts interfaced with the introduction of mobile and

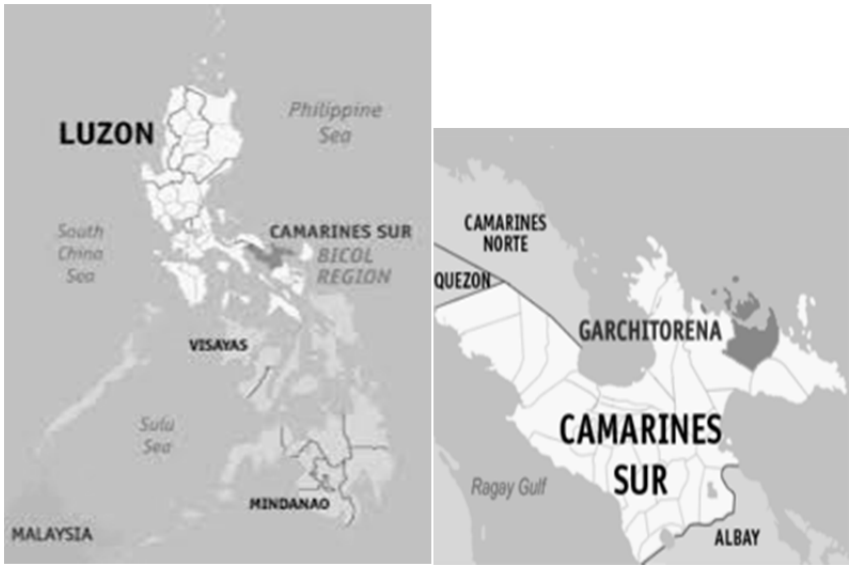
electronic payments. It also looked at the changes fishing households have encountered and how they coped with them and it identified the role of media and marketing in mobile money uptake.

The research hoped to understand the inclusion and engagement of poor fishing households in mobile money in a remote community and the socio-economic variables that influenced such engagement. Gaining an understanding of the link between the households' socio-economic condition and their participation in mobile money helped identify the forms of value storage and exchange media that had the potential to transform poor fishing households.

3. Research Objectives

Specifically, the research aimed to: (1) describe the socio-economic profile of the selected fishing households; (2) explore the processes and nature of mobile money transactions of fishing households in their daily household and livelihood activities; (3) determine the factors that influenced the engagement of the fishing households in mobile money transfer and storage; and (4) identify possible interventions of local policy makers and industry developers in expanding the potential of mobile money as a tool for financial inclusion of the poor fishing households.

Below are maps of the Philippines showing the location of the Bicol Region, Camarines Sur and Garchitorena (en.wikipedia.org).



The study was designed to ascertain the following data:

(1) Source/s of income/money for the household

(2) Procedures of how income/money is received

(3) Procedures of how income/money is transferred/stored

(4) Detail of expenditures or where income/money is used

(5) Procedures of how income/money is spent

(6) Length and frequency of usage of mobile money service

(7) Amount of money transferred/stored through mobile money services

(8) Number of mobile money service provider patronized

(9) Which procedures or facilities helped or hindered ability to transfer and store money

(10) What other facilities are needed to help facilitate transfer and storage of money

(11) What assistance is needed to help facilitate transfer and storing of money

4. Methodology

Study Design

The research utilized a mixed design. It was exploratory for it identified and described the processes and conditions of storing and transferring money among poor fishing households. It identified critical variables and concepts in those processes and conditions. It was descriptive for it determined the frequency of occurrences, percentage, mean and relationships between critical variables, processes and concepts. Interviews with household heads were conducted to obtain information concerning the current status of how the fishing households transferred and stored money in their daily lives, in a completely natural and unchanged natural environment. They yielded data for detailed analysis, data that led to important recommendations which were part of the objectives of this research.

The data was analysed through the use of frequencies, percentages, and means. To determine the factors that help or hinder the engagement of fishing households in transferring and storing money, a pre-identified set of variables were subjected to multiple regression analysis. Details are presented under "Analytical Framework."

Study Area

Garchitorena has a land area of 27,392 hectares. It has a total of 23 barangays and a population of 25,204 individuals or 4,448 households (Local Government Unit Profile: Camarines Sur/ Garchitorena. Retrieved from www.dilg.org/ attachments/ on April 2, 2014).It is politically subdivided into 23 barangays, as follows: Ason, Bahi, Binagasbasan, Burabod, Cagamutan, Cagnipa, Canlong, Dangla, Del Pilar, Denrica, Harrison, Mansangat, Pambuhan, Poblacion I, Poblacion II, Poblacion III, Poblacion IV, Sagrada, Salvacion, San Vicente, Surmaoy, Tamlawon and Taytay (Municipal Government of Garchitorena, 2013).

Collection of Data

The research mainly utilized primary data collection. The data was collected using a combination of key informant interview and surveys of identified households. The first approach gathered data about the community especially on the storing and transferring of money. The data was used as basis for the survey. The second approach gathered quantitative and qualitative data from a sample population of fishing households involved in the storing and transferring of money.

The key informant interviews were done with the town mayor, municipal planning and development officer and social welfare officer with the main objective of determining the total number of households, total number of fishing households, mobile money platforms available in the area and observed involvement of the fishing households in storing and transferring money. Key informant interviews were conducted with the mobile money service providers whose clients included fishing households. For the survey, the unit of analysis was the fishing household through the household head. By fishing household we mean those families whose primary source of income was fishing or catching fish. The researcher obtained the total population of fishing households in the covered barangays then determined the sample population using the Slovin's formula: $n = N/(1+Ne^2)$, where n = number of samples, N = total population and e = margin of error set at 5%. The survey utilized formal structured interviews guided by a pre-formulated interview questionnaire and took approximately one hour per respondent.

Sample Number

Of the 23 barangays, three were located in the upland area and families were largely engaged in planting and not fishing. So the investigation focused on the 20 barangays where

fishing households lived. Using the Slovin's formula with a 5% margin of error, the estimated sample population for the survey was 320 households. The sample population was taken proportionately from each of the 20 barangays depending on the total number of fishing households in the area.

Ethical Considerations

The identity of the key informants and respondents of the survey was treated with utmost confidentiality. The responses were presented in a generalized manner and were not connected in any way to specific respondents. Respondents were informed about the research, why they were interviewed, and how their responses would be treated. No respondent was forced to provide information. Moreover, results of the study can be accessed by the government leaders and rural poor fishers who participated in the study.

Project Activities

The main researcher recruited and oriented a research assistant. The office and materials for the research project were set up at the university library where the University Research Council had allotted space for faculty research. Afterwards, the principal investigator and assistant recruited and oriented enumerators, that is, those who would do the fieldwork. The study employed nine enumerators whose main task was to interview the targeted households. The principal investigator held a courtesy call and orientation meeting with the mayor of Garchitorena, Mr. Ricoy Sarmiento, to secure the official endorsement for the research project. Two enumerators interviewed key informants, one at a time. For the survey, each of the nine enumerators visited a respondent, one at a time, to hold an orientation about the research and conduct one-on-one interviews. Participation in the key informant interview and survey was

voluntary and none was forced to provide information. The principal investigator conducted spot checks during fieldwork, observation, field monitoring and editing.

With an estimated number of 320 respondents, each interviewer had about 30 respondents. After the data-gathering, the enumerators reviewed the accomplished forms and determined whether there were missing data or unclear answers. The principal investigator conducted a second review. The data gaps or vague answers were clarified before the team left the study area. The accomplished forms were collected and kept by the principal investigator in hard and soft copies. The data was processed using tables, frequency distribution, percentages, and multiple regression analysis. The proponent likewise prepared the 6-month progress report and final research report

Fieldwork

For the fieldwork, there were three research teams with three enumerators per team. Each team was assigned six or seven barangays (villages) and visited each area for three days. There were a total of three rounds of fieldwork per team with each round covering four to five barangays. The fieldwork was done simultaneously by the three teams and took approximately eight weeks. It had two phases: (1) the key informant interviews which were done by two enumerators on the first day of fieldwork; and (2) the survey, using semi-structured questionnaires, which covered the rest of the fieldwork.

As shown in the chart below, the research project ran for a total of 12 months starting June 1, 2014. This involved two months of preparatory activities including the polishing of the research plan, the pre-testing of the questionnaire, the finalization of the research tools, and the training of enumerators; four months of fieldwork and initial assessment of data collected; three months of data processing and analysis; and three months of report writing.

However, due to the delay in the issuance of the Institutional Review Board (IRB) approval, the extensive interviews started only in March 2015. The schedule below was revised accordingly.

Schedule of Activities

Activities	Month/Duration											
	June 2014	July 2014	0Aug 20143	Sept 2014	Oct 2014	Nov 2014	Dec 2014	Jan 2015	Feb 2015	March 2015	April 2015	May 2015
Polishing of plans and project mobilization	x	x	x									
Pre-test and sampling				x	x							
Identification and training of enumerators				x	x							
Field inspection/fieldwork/collection of data				x			x		x	x	x	
Data processing and analysis								x		x	x	
Submission of 6-month project report						x						
Writing of final report											x	x
Writing of a publishable research article												x

5. Relevant Literature

This section provides an analysis of past studies which present information regarding the socio-economic conditions of fisher families and the kinds of variables to be analysed in this study. It also presents research on the utilization of money and mobile money transfer and storage.

“Fisheries are culturally, economically, socially and ecologically important to Filipinos. They contribute significantly to income, employment, foreign exchange earnings, nutrition, and

thus to the stability of the Philippines. The sea is a huge food basket that helps maintain the food supply of the whole country and provides livelihood to almost two million people. Philippine fisheries resources, however, are rapidly being depleted, as evidenced by the decline of fish catch around the country. With the lifting of trade barriers across the world, fish products have moved into the immense global market. As a result, the people, who depend on the sea as their primary food basket, do so precariously. As large majority has slipped down to the bottom of the economic ladder to become one of the most marginalized sectors in the country." (Green 2003:1) From a study conducted by Allison and Ellis (2001:377-378), they have concluded that "...frequently... small-scale fisherfolks are characterized as 'the poorest of the poor.' The solutions advocated to the problems of poverty and resource degradation have centered on the necessity to make small-scale fisheries more economically efficient."

Owing to the data they yielded, the variables identified in the above studies were employed and tested for significance in this research. Specifically, the variables above were tested for their significance towards the financial inclusion of poor fishing households as they engaged in mobile money transactions.

"The definition of mobile money varies across different industries as it covers a wide scope of overlapping applications. In general, mobile money is a term describing the services that allow electronic money transactions over a mobile phone. It is also referred to as mobile financial services, mobile wallet and mobile payment." (Ernst and Young 2014:6) "Some major categories include: (a) mobile banking or use of mobile phone to remotely access a bank account; (b) mobile money transfer or peer-to-peer application making use of a mobile phone to send money to family or friends; and (c) mobile commerce or use of a mobile phone to perform financial transactions for purchases or sales.," (Ernst and Young 2014:6). "Mobile money is a

sustainable, scalable approach to providing convenient and affordable financial services to the unbanked. More than one billion customers in developing markets have access to a mobile phone, but do not have a formal bank account. The technology of mobile money transfers works with mobile operators and financial industry providers to accelerate the availability of financial services that can provide safety and security to the unbanked" (GSMA in Ernst and Young 2013:10).

"The development of the mobile money market is still relatively small-scale... but the mass market potential is considerable." (Ernst and Young 2014:9) "Two major applications have developed... The first is mobile commerce as a cash replacement in developed markets... However, to make mobile commerce readily available, changes to retail infrastructure are required... The second is financial services for emerging economies. In many emerging markets, particularly in rural areas, access to financial services is costly and very limited. A large proportion of the population therefore has little or no access to traditional financial services. The exceptional reach of the mobile phone, helped by the proliferation of low-cost handsets, represents a significant opportunity to create profitable services for the unbanked or underbanked" (Lonergan in Ernst and Young 2014:5).

"According to the Groupe Speciale Mobile Association (GSMA in Ernst and Young 2013:10), the number of mobile phone users has exceeded credit card users by 2 to 1, and has outnumbered the use of automated teller machines by 2,000 to 1. In addition, there is a sizeable migrant worker market in developing economies such as Africa, Asia and the Middle East, where low-income groups are seeking better working opportunities in developed nations. This creates a substantial need for systems to enable these workers to send money back home to their families. According to the World Bank (2013), recorded remittances to developing countries were

estimated at USD240 billion in 2007 — double the value in 2002. This represented three-quarters of the world's total remittance inflows. India, China, Mexico and the Philippines were the top four remittance-recipient countries with a combined USD95 billion. Mobile money transfer therefore extends remittance services to billions of the underbanked population." (Ernst and Young 2014:10)

"...The growth of mobile money services will be one of the most significant trends of the coming years. It promises many new benefits for users around the world, and is undoubtedly going to shape the telecommunications, technology and financial services industries..." (Lonergan and Dharmapalan in Ernst and Young 2014:5). "Conditional and unconditional cash transfers have been effective in improving development outcomes in a variety of contexts... The introduction of mobile money transfer systems in many developing countries offers new opportunities for a more cost-effective means of implementing cash transfer programs." The mobile money transfer system in Niger (called zap) "resulted in additional benefits – households in zap villages used their cash transfer to purchase a more diverse set of goods, the diversity of their diet improved, they used up less of their assets, and grew more types of crops, especially marginal cash crops grown by women." (Aker et.al. 2011:1)

"Three factors have contributed to the success of mobile money in the Philippines." The first is the "...characteristic of the Philippines market. Not only the extent, but also the ways in which Filipinos have adopted mobile phone have been key enablers of mobile money success. The country is the texting capital of the world and Filipino mobile users are highly SMS literate, which made the proposition of conducting financial transactions on a handset somewhat more intuitive. Access to finance is low, but latent demand for financial services clearly exists. This is evident from a thriving quasi-financial sector and sizeable domestic and international remittance

flows. Moreover, the card acceptance market and fee structure enabled both models to incentivize participants in their ecosystems." (MMU 2012:3) The second is the..."actions taken by the Bangko Sentral ng Pilipinas..." (BSP or Central Bank of the Philippines) "The BSP has enabled mobile money success through their progressive regulations. Enabling mobile operators to offer e-money, empowering non-banks to perform cash in/out and providing legal certainty to formalize rules have all contributed to success in the market." (MMU 2012:3) Third are the "...actions taken by SMART and Globe. SMART and Globe's ability to design strong offerings and subsequently build and align the interests of supporting ecosystems have been the final and critical enabler of success." (MMU 2012:3)

Aker, et.al. (2011:1) "posited that the potential mechanisms underlying the benefits of mobile money to a rural village in Niger are the lower costs and greater privacy of receiving the cash transfer via the zap mechanism, as well as changes in intra-household decision-making. This suggests that mobile transfers could be a cost-effective means of providing cash transfers for remote rural populations, especially those with limited road and financial infrastructure." A study by Irungu (2010:1) concluded that, after the M-Pesa (mobile money) became appreciated as a popular money transfer technology in Kenya, such financial "inclusion had risen by about 6 per cent in terms of people holding bank accounts, millions had been recruited into Safaricom's M-Pesa mobile money transfer service." Ndung'u (2010:1) claimed that "mobile money had, in a few years of its existence, demonstrated how financial inclusion can be leapfrogged on a major scale and in a short-time span, using appropriate technological platforms. In only three years, three phone operators had launched the service, enrolled 9.5 million customers and recruited over 27,000 agents. The total transactions had reached Sh1.8 billion per day and Sh56 billion per month."

Analytical Framework

This study determined the factors that influenced the actual use of the technology of mobile money transfers and storage by fishing households. The engagement of the households was indicated by the following, which constituted the dependent variables in the regression models: (a) total amount of money transferred/stored per month; (b) total number of service providers patronized per month; and (c) frequency of usage of service per month.

The factors that influenced the engagement of fishing households with mobile money transfers were indicated by the following, which constituted the independent variables: (a) gender of household head; (b) educational attainment of head; (c) household size; (d) household dependency ratio; (e) number of members studying outside town; (f) number of migrant worker members outside town; (g) number of migrant worker members outside the country; (h) number of members in skilled job; (i) total monthly household income; and (j) total monthly household expenditures. This can be presented conceptually as in the following diagram:

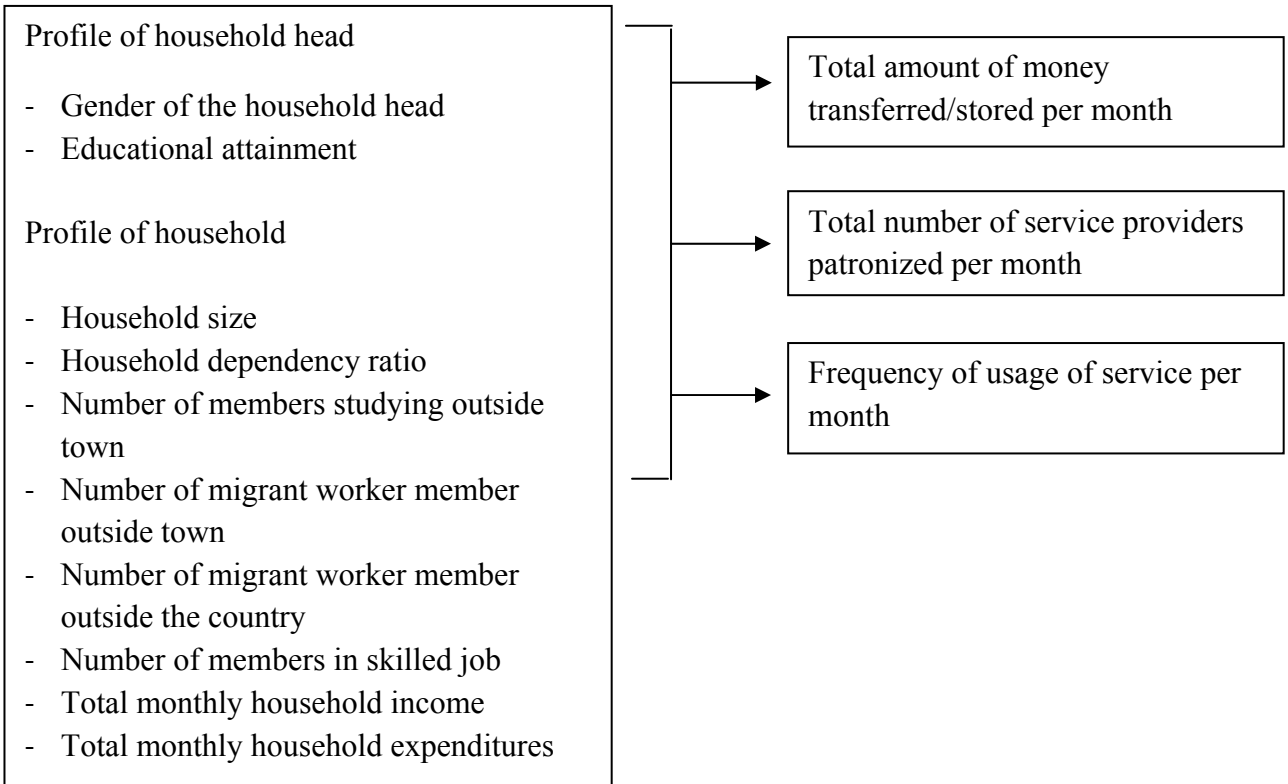


Figure 1. Factors that influence whether fishing households will use mobile money transfer/storage.

The paradigm presented above illustrates the relationship between engagement in transferring and storing money and selected socio-economic factors of the household head and the household. The socio-economic variables, as listed above on the left panel, were tested using multiple regression analysis to determine if they significantly influence the engagement of the households in transferring and storing money. The household's engagement was measured by the variables as listed above on the right panel.

The unit of analysis was the selected fishing households of Garchitorena, Camarines Sur. Important data was likewise considered regarding household head who was assumed to make major decisions on the household's participation in the storing and transferring of money. The socio-economic variables were identified based on how they influenced the decision of the household head and members as attested by studies enumerated and discussed under the "Review of Related Literature."

The regression models below were applied to estimate how different independent variables affected the dependent variables.

Model 1: $M = \beta_0 + \beta_1 G + \beta_2 ED + \beta_3 S + \beta_4 D + \beta_5 SO + \beta_6 MT + \beta_7 MC + \beta_8 J + \beta_{10} Y + \beta_{11} E + \varepsilon$

Model 2: $N = \beta_0 + \beta_1 G + \beta_2 ED + \beta_3 S + \beta_4 D + \beta_5 SO + \beta_6 MT + \beta_7 MC + \beta_8 J + \beta_{10} Y + \beta_{11} E + \varepsilon$

Model3: $F = \beta_0 + \beta_1 G + \beta_2 ED + \beta_3 S + \beta_4 D + \beta_5 SO + \beta_6 MT + \beta_7 MC + \beta_8 J + \beta_{10} Y + \beta_{11} E + \varepsilon$

The dependent variables were:

M = total amount of money transferred/stored per month

N = total number of service providers patronized per month

F = frequency of usage of service per month

The independent variables were:

G = gender of household head, where 0 = male and 1 = female

ED = educational attainment of household head where 1 = with high school education and 0 = otherwise

S = household size

D = household dependency ratio

SO = number of members studying outside town

MT = number of migrant worker members outside town (but within the country)

MC = number of migrant worker members outside the country

J = number of members in skilled job

Y = total monthly household income in the past 1 year, measured in Philippine Peso

E = total monthly household expenditure in the past 1 year, measured in Philippine Peso

The regression models above were utilized in the analysis of data. The total amount of money transferred/stored per month provided an estimate of the magnitude of monetary transactions made by the fishing households through mobile services; the total number of service providers patronized per month revealed how broad the mobile services were in the study area and the frequency of usage of service per month elucidated the level of confidence the

respondents had on mobile services. The results of the regression explained the influence of the selected socio-economic variables to the households' engagement in money transfer and storage.

6. Study Results

Socio-Economic Profile of Fishing Households

Garchitorena is a fourth class municipality located in the southeastern part of the province of Camarines Sur. It is a coastal municipality that is composed of 23 barangays which are mostly found in islands surrounded by the Pacific Ocean. The town's primary source of living is fishing and planting agricultural products such as coconut, palay, and abaca. The municipality has potential tourist spots and natural resources that can be further developed and utilized.

Survey results revealed that the households' income came from fishing, which is nonetheless dependent on the weather. During the period of the northeast monsoon (*amihan*), i.e., the months of November to February, fishing activities are infrequent because of the prevalence of strong ocean waves out at sea. Consequently, fisher folks resort to planting crops, harvesting coconuts and selling these for *copra*, the dried meat, or dried kernel, of the coconut used to extract coconut oil.

The heads of fishing households are frequently the ones engaged in the actual fishing activities, i.e., taking their small boats to sea in the early hours of the day, casting their nets to catch fish. Teenage male children sometimes join them, while other children and the spouses help sort and sell anything which their husbands catch.

Fishing households also plant rice albeit there is not enough land area for rice planting and irrigation is very difficult. As a result, many of the household members go to Manila to apply as construction workers, house helpers, drivers and bakers to augment their income. Some

fisher folks choose to stay and instead engage in seaweed culture. Upon harvest they sell the dried seaweeds at a very low price to "middle men" who in turn sell these to a third party at a higher price. Some household heads also work as pedicab drivers in their own locality. Others engage in backyard piggery near the sea that unfortunately contributes to water pollution; some domesticate native chickens and ducks for their own food consumption. Most of them also plant vegetables for personal consumption. Those who own sari-sari stores allow customers to make purchases through a credit line with meager interest. Credit lines are given to those whom they know are expecting the salary/wages of their children working in Manila or other places as household helpers, store helpers or security guards.

Garchitorena is a low income municipality due to underdeveloped infrastructure and remoteness. Since many of its barangays are located in the islands, the only means of transportation is through improvised motorized boats. The local government has inadequate programs for improving the quality of life of its constituents, even as the municipality itself is often neglected by the provincial government of Camarines Sur because of political conflicts between the leaders of the provincial government and the Partido congressional district in which Garchitorena is found.

There are a few high schools in this municipality such as the Sacred Heart School and the Pambuhan National High School. Those who can only study are the privileged and near the school sites. Most are elementary graduates and no longer pursue high school because of low income. Table 3 shows that only 47% of the respondents has reached Grade 2 elementary education level. The other 23% had reached Grade 4 level. The other 15% had reached Grade 3.

Table 3.Distribution of respondents according to educational level.

Educational level	*Frequency*	*Percentage (%)*
Grade 1	32	10

Grade 2	151	47
Grade 3	49	15
Grade 4	73	23
Grade 5	10	3
Grade 6	5	2
Total	320	100

The children of the fishing households surveyed hardly finish high school. Fewer still are those who reached and finished college level education. Instead of sending their children to school, parents make their children help in earning income by working as househelpers in Manila or elsewhere after they finish elementary school. Generally, children acquiesce to this in order to be able leave home and look for income opportunities not available in the municipality. Similarly, they aspire to be regarded positively when they return to their town. For the parents, they look forward to the additional income from remittances of their children working in Manila, Naga City or other places.

Early marriage and having numerous children, averaging six in every family, were viewed as reasons for the above. Table 4 shows that 4-6 children with 37% relative frequency ranks first in household size, followed by 7-9 children with 36% relative frequency, and thirdly by 10–12 children with 18% relative frequency.

Table4. Distribution of households according to household size.

Household Size	*Frequency*	*Percentage (%)*
1 – 3	19	6
4 – 6	117	37
7 – 9	116	36
10 – 12	59	18
13 – 15	9	3
Total	320	100

Table 5 shows the average age of children of 10-19 years old ranks first with 47% relative frequency, followed by 0-9 years old with 25% relative frequency, and third 20-29 years old with 21% relative frequency.

Table 5. Distribution of households according to average age of children.

Average age of children	*Frequency*	*Percentage (%)*
0 – 9	81	25
10 – 19	151	47
20 – 29	67	21
30 – 39	18	6
40 and above	3	1
Total	320	100

Table 6 shows that P2,400 - P112,399 annual income has 77% relative frequency which ranked as the highest for the annual income, followed by P112,400 - P222,399 annual income with 16% relative frequency, and third P222,400 - P332,399 with 5% relative frequency.

Table 6. Distribution of households according to annual household income.

Annual income (Php)	*Frequency*	*Percentage (%)*
2,400 - 112,399	249	77
112,400 - 222,399	50	16
222,400 - 332,399	14	5
332,400 - 442,399	5	2
442,400 and above	2	1
Total	320	100

The household head's source of livelihood is fishing which is dependent on the weather. During the period of the northeast monsoon (*amihan*), i.e., the months of November to February, fishing activities are infrequent because of the prevalence of strong ocean waves out at sea. Consequently, fisher folks resort to planting crops, harvesting coconuts and selling these for *copra*, the dried meat, or dried kernel, of the coconut used to extract coconut oil (http://en.wikipedia.org/wiki/Copra). They also plant rice albeit there is not enough land area for

rice planting and irrigation is very difficult. As a result, many of the household members go to Manila to apply as construction workers, house helpers, drivers and bakers to augment their income. Some fisher folks choose to stay and instead engage in seaweed culture. Upon harvest they sell the dried seaweeds at a very low price to "middle men" who in turn sell these to a third party at a higher price. Some household heads also work as pedicab drivers in their own locality. Others engage in backyard piggery near the sea that unfortunately contributes to water pollution; some domesticate native chickens and ducks for their own food consumption. Most of them also plant vegetables for personal consumption. Those who own sari-sari stores allow customers to make purchases through a credit line with meager interest. Credit lines are given to those whom they know are expecting the salary/wages of their children working in Manila or other places as household helpers, store helpers or security guards.

During the months of the fishing season, the income of fishing households is negatively affected by trawl fishing taking place in their fishing areas. They only catch few and small fishes that are only enough for their consumption. The Bureau of Fisheries and Aquatic Resources has no strict implementation in regulating and apprehending violators; in addition, it has no proper distinction of each territory and fishing zone.

Most of the fishing households are partner-beneficiaries of the national government's *PantawidPamilyang Pilipino Program* or 4Ps that provides cash grants to extremely poor households to improve their health, nutrition and education particularly of children aged 0-14.

Frequently, the family's household income is inadequate in covering household expenses. The reasons for this are that there are more family members to feed, and income from fishing activities is not enough to meet this need. Table 7 shows that P38,800 - P75,799 annual food expenses ranks number one with relative frequency of 50%, followed by P1,800 - P38,799

annual food expenses with a relative frequency of 26%, and third P75,800 - P112,799 with relative frequency of 19%.

Table 7. Distribution of households according to annual food expenses.

Annual food expenses(Php)	*Frequency*	*Percentage (%)*
1,800 - 38,799	83	26
38,800 - 75,799	160	50
75,800 - 112,799	61	19
112,800 - 149,799	13	4
149,800 and above	3	1
Total	320	100

Water is free in the town and most of them get the water from a deep well. The majority of those surveyed do not pay house/lot rental. Almost all own the house and lot they inhabit, while very few are informal settlers who nonetheless do not also pay rent. Though they do not have water expenses, house/lot rental expenses, almost all pay for their electricity usage. In the *Poblacion,* the power supply of the local electric cooperative is available for 24 hours. At the remote barangays in the islands, only six hours of electric services are provided which are from 4:00 in the afternoon to 10:00in the evening.

Owing to the remoteness of the area, UHF and VHF signals of free-to-air television programs are poor. Residents who can afford it have subscribed to prepaid cable satellite television provided by a cable television provider as their source of information and leisure. Residents pay Php3,000to 3500 for installation and purchase their monthly prepaid load worth Php100 to 130 in stores in the *Poblacion*. Those who cannot afford cable satellite television resort to buying pirated DVD movies and video karaoke for their leisure. A consequence of the above is increased consumption of electricity which subsequently increases household expenses.

Table 8shows that P0 - P10,799 annual electric expenses with relative frequency of 94 % ranks first, followed by P10,800 - P21,599 annual electric expenses with relative frequency of

3%. For those who cannot afford to have electric power services installed in their homes, they illegally tap electricity from their neighbors and pay the latter around Php30 for one light bulb. Those who cannot even afford to buy a television set and apply for electric connection just watch television at their neighbor's house.

Table 8. Distribution of households according to annual electricity expenses.

Annual electricity expenses (Php)	*Frequency*	*Percentage (%)*
0 - 10,799	301	94
10,800 - 21,599	10	3
21,600 - 32,399	3	1
32,400 - 43,199	1	0
43,200 and above	5	1
Total	320	100

Surveyed fishing households buy clothes occasionally. They spend very little on clothing and luxury items because they attend very few social gatherings which require of them to dress up. They are content with used clothes handed to them by their kin and relatives who are better off. Some buy clothing from thrift shops or stores selling secondhand goods such as clothing, shoes, bags, furniture, etc. These are sold from Php10 to 50.

Surveyed fishing households seldom buy clothes for their children; when they do, this is mostly once a year during Christmas season for the school's Christmas party. Some buy clothes and shoes during elementary graduation and during Peñafrancia fiesta, feast in honor of Our Lady of Peñafrancia in Naga City, to avail of the fiesta sale. Table 9 shows that 86% of those surveyed have annual clothing expenses ranging from Php0 –3,599 while 9% has Php3,600-7,199.

Table 9. Distribution of households according to annual clothing expenses.

Annual clothing expenses (Php)	*Frequency*	*Percentage (%)*
0 - 3,599	275	86

3,600 - 7,199	28	9
7,200 - 10,799	1	0
10,800 - 14,399	10	3
14,400 and above	6	2
Total	320	100

As regards their health, fishing households spend less for medications because they still believe and depend on alternative healing practices such as the use of herbal medicines, and the services of *hilot* practitioners(*albularyo* or *parasantigwar* and *parahilot*).

*Hilot*is an ancient Filipino art of healing. A *manghihilot* (*hilot* practitioner) and the *albularyo* (herbalist) are usually cheaper alternatives to medical doctors in the Philippines, especially in very deep rural areas. When pregnant women go into labor, they avail of the services of a *hilot* practitioner. Those who can afford them, buy vitamins for their babies. But most of the fisher folk only buy first aid medicines such as paracetamol for fever and flu, loperamides for diarrhea.Whenthey are not cured by alternative medicine, they bring themselves for confinement at the Bicol Medical Center, a government hospital. Accordingly, 94% of those surveyed have annual medical expenses ranging Php0 –14,399 only, while only 3% have expenses amounting to Php1,400 – 28,799, as indicated in Table 10.

Table 10. Distribution of households according to annual medical expenses.

Annual medical expenses (Php)	*Frequency*	*Percentage (%)*
0 - 14,399	301	94
14,400 - 28,799	10	3
28,800 - 43,199	3	1
43,200 - 57,599	3	1
57,600 and above	3	1
Total	320	100

Educational expenses receive the second highest percentage in the allocation of household income and budget. These cover uniforms, tuition fees, allowances, projects and other

school fees; and monthly board and lodging bills for those students who are at high schools that are far from their residences. Table 11 shows that 86% of fishing households surveyed have annual education expenses rangingPhp0 - 17,999. Only 7% has annual education expenses worth Php18,000 –35,999. Incidentally, education and food have the biggest percentage of income allocation.

Table 11.Distribution of households according to annual educational expenses.

Annual educational expenses (Php)	*Frequency*	*Percentage (%)*
0 - 17,999	275	86
18,000 - 35,999	22	7
36,000 - 53,999	13	4
54,000 - 71,999	3	1
72,000 and above	7	2
Total	320	100

Other expenses like mobile phone load are very minimal. Fishing households purchase load credits only when they ask their family members to send money, and to get the tracking or reference numbers of the mobile money transfer. They only spend Php15 - 30 a month for their load credits to follow up the money sent. Transportation expenses are incurred only when they go to the town proper after every two months, that is, when they receive the cash grants for the educational support of their children coming from the basic social services program of the government. They do not travel much because of the substantial expenses involved, that is, the motorboat fare or gasoline expenses.

Processes and Nature of Mobile Money Transactions

Garchitorenais one of the least accessible municipalities in Camarines Sur, which makes physical transfer of persons, goods, services and money extremely difficult. Residents are dependent on two modes of transportation—motorboat and land transportation. With these

geographical conditions, the socio-economic profile of the respondents reveals that aside from fishing and farming, many household heads and their children are working outside Garchitorena for better income opportunities.

Households in the barangays found on the islands used to receive money from loved ones or family members abroad through postal money order which nevertheless took weeks. They also made use of what they called the "door-to-door" means of sending, in which relatives abroad send money through a trusted person who was returning to town. This also proved inefficient and unreliable.

Sending money through mobile money transfer or e-money, according to respondents, was more reliable, efficient, and inexpensive. Those sending money had to merely look for a e-money service providers and supply the latter with the following: the number of the e-money service provider whom the cash recipient is patronizing; the name of the recipient; the mobile number of the recipient; the amount of the cash being sent; the amount itself to be sent; and the transaction fee. During the course of the transaction a reference number and a confirmation number would be generated and be sent to the recipient's mobile number as well as to that of the recipient's e-money service provider. The recipient must present the reference and confirmation numbers to his/her e-money service provider to claim the amount sent to him/her. Similarly, another transaction fee must be paid by the recipient, which in the case of the barangays on the islands, range from Php30 to 60 per Php1000 received. The whole process of sending and receiving money takes only minutes.

Respondents noted, however, some problems which arise at times. Frequently, there were only two or just one e-money service provider in the remote barangays. When these ran out of cash to be dispensed to cash recipients, the latter had to wait for days or until such time that the

e-money service provider acquires the amount due the cash recipients. Usually, this happens when someone sending money courses it through the said e-money provider; the latter can then use that amount to pay the cash recipients.

As presented earlier, data show that household expenses are larger than the household income. The majority of the respondents receive money from their children and kin who are working outside Garchitorena using the mobile money transfer and storage (*Smart Padala*).

Table 12. Mobile money sent to the respondents*(multiple responses)*.

						Total%
A. Amount of money (Php)	0 (did not receive but do send money) *20/477 (4.19%)*	1000 and below *220/477 (46.12%)*	1001-2000 *159/477 (33.33)*	2001-3000 *40/477 (8.38%)*	3001-above *38/477 (7.96%)*	*100*
B. Relation of the respondent	1st degree of relationship (Spouse, sibling, child, parent) *407/477 (85.32%)*	2nd degree of relationship (Uncle, aunt, niece, nephew) *5/477 (1.04%)*	3rd degree of relationship (Parent-in-law) *27/477 (5.66)*	Others (Business partner, friend) *38/477 (7.96%)*		*100*
C. Frequency of transaction	No Transaction *20/477 (4.19%)*	1-4 times in a year *185/477 (38.78%)*	5-12 times in a year *224/477 (46.96%)*	13-24 times a year *14/477 (2.93%)*	25 times in a year and above *34/477 (7.12%)*	*100*
D. Use for the money	Household Expenses *374/477 (78.41%)*	Education *34/477 (7.13%)*	Starting capital for business *20/477 (4.19%)*	Medicine *18/477 (3.77%)*	Out of goodwill/others *31/477 (6.50%)*	*100*

As indicated in Table 12, around 407 instances or 85.32% of money transactions were received by the respondents from persons of first degree of relationship. This shows that despite the financial shortcomings felt by the respondents, immediate family members are helping them to cope with their household expenses (78.41%) including food and basic needs. The majority of these immediate family members are working in Manila as construction workers, house helpers, bakers, drivers, or factory workers. Such types of employment provide low income since their compensations are frequently that of the minimum wage. Consequently, the data in Table 12 reveals that the transactions of mobile money transfer and storage that ranked first was ranging Php1000 and below(46.12%), and then followed by those ranging Php1001-2000(33.33%).

Table 12 indicates that despite having minimum income, respondents' frequency in receiving money from them was as often as 5-12 times in a year (46.96%). That means respondents are receiving from them every month or every other month. Only in 20 instances out of 477 transactions or 4.19% did the respondents not receive any money; nonetheless they engage in mobile money transfer and storage by sending money through it.

In the meantime, the data in Table 12 indicates that the prevailing reasons for sending money to the respondents are to defray household expenses (78.41%). That household expense includes food and daily consumptions. Another purpose of sending the money is for education of children (7.13%). Aside from basic need, education (7.13%) is viewed by the respondents as essential. Some reasons where to use the money is capital for business (4.19%), for medicine (3.77%), and out of goodwill or when respondents asked money from them (6.50%).

Table 13. Mobile money sent by the respondents*(multiple responses*).

						Total%
A. Amount of Money	0 (did not send money but do receive) *195/350 (55.71%)*	1000 and below *88/350 (25.14%)*	2000-1001 *45/350 (12.86%)*	3000-2001 *8/350 (2.28%)*	3001-above *14/350 (4.0%)*	*100*
B. Relation of the respondent	1st degree of relationship (Spouse, sibling, child, parent) *125/155 (80.64%)*	2nd degree of relationship (Uncle, aunt, niece, nephew) *4/155 (2.58%)*	3rd degree of relationship (Parent-in-law) *10/155 (6.45%)*	Others (Business partner, friend) *16/155 (10.32%)*		*100*
C. Frequency of transaction	No Transaction *195/350 (55.71%)*	1-4 times in a year *70/350 (38.78%)*	5-12 times in a year *66/350 (46.96%)*	13-24 times a year *2/350 (2.93%)*	25 times in a year and above *17/350 (7.12%)*	*100*
D. Use for the money	Household Expenses *64/155*	For Education *60/155*	Starting capital for business *6/155*	Medicine *15/155*	Out of goodwill/others *10/155*	

	(41.26%)	*(38.70%)*	*(3.87%)*	*(9.67%)*	*(6.45%)*	*100*

The sending transactions of the respondents are not as often as receiving mobile money. Out of the 320 respondents, 195 did not engage in sending mobile money and remained as recipients from other individuals. In Table 13, a significant number of transactions (195or 55.71%)show this. Nevertheless, 125 out of 155 (80.64%) transactions are meant for the first degree of relations. Most of the reasons for the money are for household expenses and for education of their children who are studying at the *Poblacion* and outside Garchitorena. The purposes of sending money are for monthly school allowance and tuition fees. The frequency of sending the money is as often as 1-4 times in a year (38.78%) and 5-12 times in a year (46.96%) respectively.

The sources of money are usually coming from fishing, farming, and from the financial help sent by their other children working outside Garchitorena. According to the respondents, using mobile money transfer and storage technology has always been helpful in coping with their financial difficulties. Respondents compared the "door-to-door" mode of sending (the traditional way of sending money prior to the introduction of mobile money transfer and storage) and the mobile money transfer and storage technology using *Smart Padala*. According to them, using mobile money transfer and storage was far better than the "door-to-door" sending process. Mobile money transfers were better because they were "fast, convenient, reliable," according to respondents. Others mentioned that the transactions were "safe and efficient." They added that through mobile money transfers "we also saved time and effort." Mobile money transfers had always been reliable in times of emergency, respondents stated, because someone could receive the money sent to him/her in few minutes in contrast to the "door-to-door" sending which took

days before one received it. “With SMART Padala, relatives and kin can send financial help within minutes, and not days or weeks,” remarked one respondent.

However, some difficulties are noted in the use of mobile money transfer and storage technology. One is the poor and inconsistent signal or connection with the network provider. The majority of the respondents in the island-barangays experienced limited and inconsistent mobile connection. The problem was especially acute during calamities. Consequently, problems of delayed reception of SMSs containing the confirmation of the money transfer and reference numbers arose. In turn, this resulted in the delay of the reception of the money sent to them.

The respondents also shared that there were only a few mobile money transfer and storage providers in or near their area. Since they could not do anything about this, respondents stated they patronized a provider even though the rate being deducted per transaction was above the standard rate charged in the mainland area. Thus, the respondents suggested having more providers in the area. They also expressed the need to have additional cell sites in their area to boost the signal so that transactions of mobile money transfers would become smooth and unhindered.

In summary, the benefits of mobile money transfer and storage are incomparable to its costs. Respondents assess the technology of mobile money transfer and storage very positively.

Factors that Influence Engagement in Mobile Money Transfer and Storage

Findings from the survey indicated correlations between the dependent variables and independent or socio-economic variables of the study. With the use of multiple regression analysis, the study determined that the socio-economic (independent) variables significantly

influenced fishing households' engagement of mobile money transfer and storage technology (dependent variables). The dependent variables were the amount of money sent and the amount of money received; while the independent variables were the educational level of household members, household income, household size, and household expenses.

Finding 1: The higher the educational level of fishing household heads, the greater the amount of money they have sent. Analysis placed "educational level" variable at +4837 in influencing dependent variable "amount of money sent." What might be inferred from this finding was that users of mobile money transfers and storage had a greater understanding of the technology involved so that its reliability was easily accepted. In other words, it was inferred that educational level increased the extent of confidence of the respondents to send money through mobile services as indicated by the increasing amount sent as the household head went up the formal education ladder.

Conversely, while higher levels of educational attainment appeared to influence positively the usage of this technology, low educational levels of household heads did not seem to have a negative correlation to the usage of mobile money transfer and storage technology.

Meanwhile, the increased amount of money sent through mobile money transfers and storage could also be attributable to the recognition by the fishing household heads—afforded by their education—of the large array of consumer options that mobile money cash recipients had; hence the increased amount of money sent to accommodate those options.

Finding 2: The higher the household income, the greater the amount of money sent by these households. Based on statistical analysis, "household income" variable has yielded +0.057 in influencing dependent variable "amount of money sent." As households' income increased, the capacity to send money to household members outside of town also increased. Results of the

statistical analysis proved that high amount of income led to greater tendency to avail of mobile money services. This may be traced to the set of data from the survey showed that households with more income sent their children to schools outside of their barangay, and even outside of town. The amount needed to underwrite their education and living expenses was frequently sent through mobile money transfer.

Finding 3: The higher the educational level of fishing households, the greater the amount of money received by these households. With the attainment of higher education levels by fishing household heads, their income opportunities increased since employment possibilities outside of Garchitorena became available. Consequently, the household heads' employment and income opportunities outside of town translated to their increased use of mobile money transfer technology.

Finding 4: The bigger the size of the fishing household, the greater the amount of money received by the household. Data from the survey also demonstrated that as fishing households increased in size, so did the amount of money they receive through mobile money services. What can be inferred here was that the amount sent had corresponded to the perceived financial need being addressed by the money transfers.

Finding 5: The higher the household expense, the greater the amount of money received by the household. The same data showed that as fishing households' expenses grew, the amount of money transfers made to their account also increased, suggesting that the former variable directly correlated to the latter variable. As pointed out above in Table 14, money transfers to fishing households were substantially for underwriting the expenses of the fishing households.

In the meantime, regression analysis of variables concerning the number of providers patronized by the respondents and their frequency of usage of mobile money transfers indicated that these did not have significant predictors based on the analytical framework of the study.

The results of the Regression Analysis that were the basis for the findings enumerated above are provided below.

REGRESSION (DEPENDENT VARIABLE: AMOUNT OF MONEY SENT)

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	HHExp, OFW, MigOut, Sex, DRatio, HHInc, HHsize, StuOut, SkMem, Educ[b]	.	Enter

a. Dependent Variable: MOSent

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.260[a]	.068	.037	31731.62431

a. Predictors: (Constant), HHExp, OFW, MigOut, Sex, DRatio, HHInc, HHsize, StuOut, SkMem, Educ

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22117143619.344	10	2211714361.934	2.197	.018[b]

	Residual	304082586348.708	302	1006895981.287		
	Total	326199729968.052	312			

a. Dependent Variable: MOSent

b. Predictors: (Constant), HHExp, OFW, MigOut, Sex, DRatio, HHInc, HHsize, StuOut, SkMem, Educ

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6576.252	8803.857		-.747	.456
	Sex	2833.133	6510.677	.025	.435	.664
	Educ	4837.637	1777.064	.168	2.722	.007
	HHsize	-299.154	716.818	-.025	-.417	.677
	DRatio	-244.060	8526.263	-.002	-.029	.977
	StuOut	-2178.862	3573.730	-.036	-.610	.543
	MigOut	-1529.901	1678.490	-.054	-.911	.363
	OFW	-9832.369	14817.838	-.038	-.664	.507
	SkMem	-2219.127	3496.012	-.038	-.635	.526
	HHInc	.057	.022	.154	2.628	.009
	HHExp	.014	.018	.045	.766	.444

a. Dependent Variable: MOSent

1st model: Dependent variable: Amount of Money Sent, Significant variables (and coefficients): Education (+4837); Household income (+0.057)

REGRESSION (DEPENDENT VARIABLE: AMOUNT OF MONEY RECEIVED)

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	HHExp, OFW, MigOut, Sex, DRatio, HHInc, HHsize, StuOut, SkMem, Educ[b]	.	Enter

a. Dependent Variable: MORec

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.282[a]	.079	.049	35086.98800

a. Predictors: (Constant), HHExp, OFW, MigOut, Sex, DRatio, HHInc, HHsize, StuOut, SkMem, Educ

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32076737394.467	10	3207673739.447	2.606	.005[b]
	Residual	371791211556.561	302	1231096727.008		
	Total	403867948951.028	312			

a. Dependent Variable: MORec

b. Predictors: (Constant), HHExp, OFW, MigOut, Sex, DRatio, HHInc, HHsize, StuOut, SkMem, Educ

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

1	(Constant)	-6418.852	9734.794		-.659	.510
	Sex	1500.349	7199.128	.012	.208	.835
	Educ	4123.611	1964.974	.129	2.099	.037
	HHsize	1627.902	792.616	.123	2.054	.041
	DRatio	2239.710	9427.846	.014	.238	.812
	StuOut	-3203.943	3951.623	-.048	-.811	.418
	MigOut	-1292.126	1855.977	-.041	-.696	.487
	OFW	13375.697	16384.706	.047	.816	.415
	SkMem	4693.579	3865.687	.072	1.214	.226
	HHInc	-.004	.024	-.010	-.168	.867
	HHExp	.058	.020	.169	2.894	.004

a. Dependent Variable: MORec

2nd model: Dependent variable: Amount of Money Received, Significant variables (and coefficients): Education (+4123); Household size (+1627); Household expense (+0.058)

3rd model: Dependent variable: Number of Providers, Significant variables – NONE.

4th model: Dependent variable: Frequency of Usage, Significant variables – NONE.

Interventions of Governments and Industry for Financial Inclusion of the Poor

Many of the respondents suggested that telephone companies such as Smart and Globe increase the number of their cellsites to expand their network coverage. They believed that with this expansion of network coverage, more residents of the barangays in the islands would be able to make use of e-money transfers. Indeed such an expansion would increase the potential of the technology of mobile money transfer and storage or e-money as a tool for the financial inclusion of the poor in Garchitorena.

For their part, both the local government unit and national government agencies can endeavour to improve existing infrastructures that support the use of telecommunications technology, e.g., the municipal local government can intensify safety measures of cellsites against attacks from criminal and insurgent elements; national government agencies such as the DOTC can regulate service fees of e-money transactions. Finally, the barangay governments in the islands can establish themselves as an e-money transaction center to service the needs of its residents.

Key informant interviews with e-money service providers disclosed that one e-money account of theirs has a Php50,000 transaction limit per month. What this means is that in a month they can store and transfer only up to Php50,000 with one e-money account. When the limit is reached, they have to wait for next month to come around for them to be able to use that account again for transactions. In the household surveys, many respondents remarked that they would rather that this limit be increased to prevent delays in their cash claim transactions.

In a similar note, respondents stated that they hoped the telephone companies would increase the number of their cell sites in the area to expand their network coverage. This would also address problems of delays in the reception of confirmation and reference numbers of e-money transactions.

8. Study Outcomes, Contributions, Ideas and Plans for Further Research

Reflections on the fieldwork process such as methodological issues, successes and problems encountered in data collection activities

Owing to the remote location of the municipality, and most specially its barangays that are situated in the islands, fieldwork teams had to contend with difficulties and risks in travelling

to these areas. Some barangays could only be reached by travelling by boat for an hour and then on foot for two hours. In other cases, since some of these coastal barangays openly faced the Pacific Ocean and the fact that the easterly winds were blowing at the time of the fieldwork, reaching these villages required a roundabout and longer trip by boat.

In the fieldwork process, seeking the assistance of the local government unit at the municipal and barangay levels has proven to be invaluable. Moreover, having secured the services of a boatman who eventually doubled as our guide and liaison to the barangays in the islands immensely facilitated our fieldwork activities.

During the survey, several issues emerged. First, targeted respondents found it difficult to suggest solutions to problems they have identified, e.g., poor signal; as well as identifying institutions or agencies that would address them. Second, a huge majority of the respondents did not earn income on a regular basis, e.g., weekly or monthly. This was due to the fact that fishing activities were irregular and income earned from them was also irregular. Third, reported annual expenses of the households were substantially larger than their reported annual income. This suggested two possibilities: perennial household budget deficits that indicate debt; or inaccurate assessment of income and/or expenses by the respondents.

Lingering questions, new directions for going forward, and/or insights relevant for applied, design and/or policy recommendations

There are indicators during the course of the research that non-technological factors affect the usage of the technology of mobile money transfer and storage. Trust in the person of the mobile money service provider and personal relations with these service providers presented themselves as significant considerations in the usage of the abovementioned technology, overriding even concerns of poor and unreliable mobile network signal or connection.

Any details or 'nuggets' you encountered in your research that were interesting or unexpected – even if they fall outside or don't quite fit your analytical framework.

During the survey, it became apparent that educational levels of household heads also have some correlation to the size of the household. When those interviewed indicated college level education, their household size were relatively smaller in contrast to those households whose heads only reached primary or even secondary levels of education.

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