From Cash to Electronic Money: Albania as Case Study

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Abstract

Albania is classified among countries with middle income by the World Bank classification. Like many other developing countries, the income per capita in Albania is limited. The aim of this paper is to study the alignment of individuals in this country to technological banking services and in particular the acceptance by individuals resident in Albania transition from cash to bank money. Using data collected on the field, this study aims to describe the adjustment of financial literacy in the Albanian mentality. Consumer behavior, the stories of the past and mentality play a key role in the approaches to the banking system. The results of this study will help banks and financial institutions to implement successful strategies to educate the population to lead consumers to an easier acceptance of services and changes in the banking system. Empirical analysis concludes that the transition to electronic money system is a process that should not be imposed but it will happen automatically as the country climbs the stairs of development.

Keywords: *Cash money, Electronic money, Transactions, Grocery list*

Introduction

Money is a holder and store of value. It presents the calculation unit and store of value. Throughout the history, money has changed its physical form, by certain effects or goods which were used as exchange means; precious metals, coins, banknotes, checks to bank accounts, credit cards, etc. With the development of technology enabled and developed a new aspect in the perception and use of cash. Despite the fact that cash still stands as the most popular means of payment, the traditional way of using money changed. Payments now are made using cash, cards or bank transfers. These are ways of payment instruments. We distinguish two main groups of payment instruments; paper and electronics. Paper instruments are: cash, check, transfer orders and payment orders on paper. For which it is spoken today in Albania, as in all the world is electronic money. In the researcher's knowledge have not been published works on this form of payment for Albania, how most Albanians citizens are aligned with this form and do they want it, those who have not yet embraced electronic money. The main objective is that on the conclusion of this paper we will be able to receive an information about accurate and detailed as possible on how much Albanians are aligned and if they do want new banking technology, and which are the categories that have embraced more easily the new banking technology.

Literature Review

For more than a decade, the information technologies have significantly affected the banking industry. Banks and other financial institutions have improved their function as financial intermediaries through the use of various information technologies. In recent years, we have witnessed a broad technological revolution. This applies mainly to Europe, where the integration of the European market for payment services allows competition between banks and non-banks to manifest itself in the implementation and absorption of faster new payment tools. In this context it is worth noting that a significant change has occurred in our daily life has been a form of payment for retail purchases. (Chang, 2002).

Using data from domestics in Peru, Jacoby (1994) found that lack of access to financial products reduces the chances for poor families to send their children to school. This study shows the importance of participation in financial markets.

Lusardi (2008) proposed that people with low levels of financial literacy are less likely to participate in financial markets and use the banking products to. His

study concludes that ignorance of basic financial concepts resulting in failure to plan retirement, lack of participation in the stock market, bad borrowing behavior and participation in banking technologies.

Barslund and Tarp (2008) conclude that education, age, employment, assets, credit history, and land rights have an effect on the demand for formal and informal credit and banking products. Although the theory available offers insights into factors contributing to higher demand for financial products to individuals in some parts of the world, very few of them have been implemented in Albania.

Fusaro (2006) concluded that age and income are important variables that affect the perception of financial products and innovations. Study was realized for debit cards using data from consumer accounts in a small depository institution. Overall compliance with payment by cards and online was noted that increased with increasing age and income growth. Making payments with the card allows the realization of lower commissions on transactions cost, faster turnover and results in considerable economic benefits.

Carow and Staten (1999) evaluated the impact of demographic characteristics and features of the payment methods chosen by customers, in a gas station between multiple forms of payment. Age education and income had significant effects in the form of payment chosen by the individual consumer.

Bayrus (1987), Norton and Bass (1987) have noted that the willingness of a customer to adopt a new technology is based on the experience of his approach to technologies preliminary approximations, and the impact of new technology is expected to be particularly if the positive relationship between the old and the new is complementary. In this study, taken from the experience of previous services will serve as a basis for acceptance of bank cards. Also, previous experiences which bank payment will be used as variable to determine the adoption of bank cards. Customers who have experience in the use of computer programs for money management are more likely to use bank cards compared to individuals who do not have this experience. Customers who use online banking before are more likely to use cards compared with customers who do not have this experience.

Although consumers have shown an interest in advanced electronic bank services that are mostly related to the internet and tried to have the resources and means, friends, to conduct transactions, they have not changed so fast their tendency to use old tools of payment which are already familiar. For example, new products or services, electronic banking has failed to replace a fast time traditional bank products or services, not electronic.

According to the 2014 report of the Bank of Albania (system of payments and the issuance of currency) the number of cards in circulation has been increased (7% last year compared with 2013). The increase in the number of bank cards (debit and credit) is followed by an increase in card transactions, which continues to have

the major share transactions for cash withdrawals present report. So the number of transactions has increased, but not for purchase but mostly for withdraw while neighboring countries are moving rapidly on the development of electronic money.

Study Analysis

In this section follows the methodology used to identify the factors determining the impact of the transition from cash to use bank money. Next, it will be treated the strategy used to construct the questionnaire and descriptive analysis

Research Strategy

The study examined research in the region and the objectives of the paper answered. Also they get different information from several official pages on the internet, from the Institute of Statistics and the World Bank. In order to achieve the most accurate research study, the researchers relied on two forms of data collection, the questionnaires and surveys.

According to (INSTAT, 2011), the population in the district of Tirana, is 749'365 people. Tirana is composed of several areas where outside the "yellow line" (within the yellow line called the central Tirana area), there are approximately 190 916 inhabitants (01.01.2015). Under the new initiative by the Ministry of Finance suggested to pass from a system of payment by cash payment by the bank to individuals who are able to make these payments are those aged over 18 years.

For the study it was not reasonable to four areas selected at random. These four areas are Lapraka, Kinostudio, Qytet-Studenti and Selita. In these areas the working group started addressing in ways that were selected also randomly. They were randomly settled even the number of flats in which the questionnaire was developed. Given that the number of individuals able to make purchases with bank card was 190.916 (where since the 100,000 <190,916 <1'000'000), this results in a sampling of 210 individual respondents will be eligible but this is only for the district of Tirana, is not representative for the suburban areas in particular. After the survey conducted by 210 surveys we had 139 response a where the non-response rate was approximately 33% higher that the estimated rate at the beginning of the study. Problems of methodology and sample:

1. What should be emphasized as the main problem is that there is a probability that the sample would be small or the sample itself would not be representative.

2. The high rate of non-response. This rate is thought to be so because the period in which the survey was conducted.
3. Individuals were in fore-front communication with the interviewer and the answers may not have been truthful.
4. Areas selected to conduct the survey may not be representative areas.

Descriptive Analysis

The first question addressed was whether the respondents knew basic banking products, a significantly high percentage answered yes. This question is based on the literature review which suggests that knowledge of basic products affects the alignment of individuals on the use of electronic cash. Responses to this question will be dealt extensively in econometric analysis.

GRAPH 1: The alternatives most commonly used for financing

The alternatives most commonly used for financing
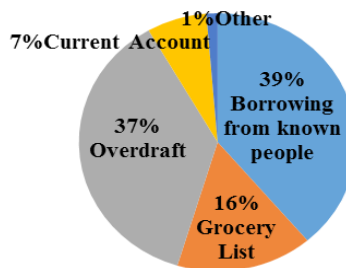
Source: Authors

The alternative which occupies the highest percentage, is borrowing from known ones, a traditional form of financing for Albanians. Respondents said that they find it easier to ask for money from people they know to fund themselves then from other forms of financing. Funding through loans is the latest form of financing which will settle as they do not trust banks, according to them, in the end the bank takes many times more money than has been the loan.

Grocery List was the suggested alternative by the respondents as a form to meet the basic necessity of feeding their families. This filling needs form suggested by those families who were unemployed or were forced not to work because they had a family member unable to work and monthly income were lower. They said they pay the grocery list when they can, when they could find other income but also this form of financing is running out because the seller always less allow grocery

lists. Another form of financing was through an overdraft which was seen as an acceptable alternative for those individuals who were employed and had average salaries.

What looks promising for the future was the willingness of respondents to have a personal bank account. Survey ran said that 71% of the individuals asked answered that they would like to have a bank account and 29% would not like it. Individuals who gave a negative answer indicated that having a bank account, even if they would not use it, will make them spend to maintain it while the rest said they would never leave their money in a bank or a bank card.

One of the survey questions was on the trend of the participants on getting information about the bank product they used. To the questions If you have used financial products, have you attempted to seek information about the product or about the different offers in the market, respondents answered 97% "yes" and 3% "no". The high percentage with "yes" answers speaks positively but it still cannot give us information on whether they will seek information individually for the transition from cash into the electronic money, to the advantages and disadvantages of this change, but despite this there is a percentage of confidence that this will happen. Asked which are the sources of information about new banking products or changes in the financial system they listed as the first conductor the information on TV, more specifically from the news, the second source listed about latest changes were the newspapers and after this came the messages on mobile devices, magazines, emails and leaflets in the bank.

FIGURE 1: The sources of information about new banking products
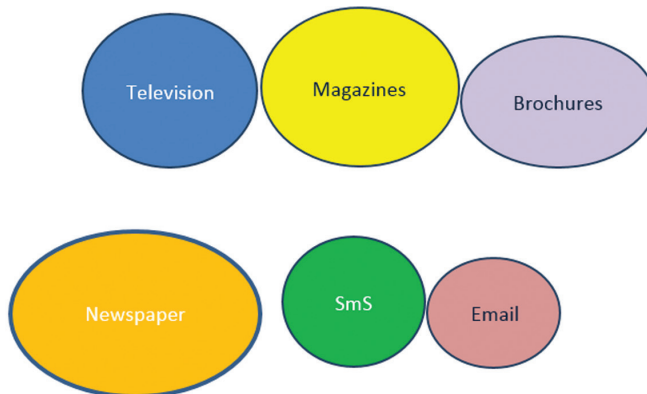
Source: Authors

The last question that was addressed was whether respondents were aware of the new initiative which is undertaken by the Ministry of Finance for payment with bank products and not with cash, and if they agree with this initiative.

Respondents said they had heard about this change but not as a statement made by the Ministry of Finance. The percentage of those who agreed with this change was relatively low, 30%. The rest said they did not support this initiative. The majority of respondents supporting this change were men who knew about this initiative and had information about it, they knew banking products, were educated and with relatively high income. The percentage of individuals who expressed that they do not support this initiative listed a few reasons. The main reason were low incomes and this was noticed more on individuals who use grocery lists to finance themselves when they had insufficient income. This category stated that if there are no cash payments their possibility to get funds would be lost. A part of those who use overdrafts said that they do not support this initiative because it would place committees.

With the data collected on the field and then processed, in this paper will be studied how much influence have variables like gender, age, education, income, information and knowledge of banking products in accepting the shift from cash to the money bank.

Metodology and the Model of Log

Initially it implemented a simple linear model with the usual method of least squares. The distribution of remains was tested by Jarque-Bera and Breusch-Pagan test for judging the hetero-scedasticity
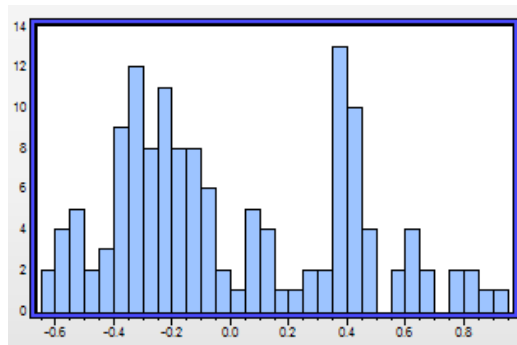
The Jarque-Bera normality test

Hypothesis

H0: the remains have normal distribution

H1: the remains do not have normal distribution

FIGURE 2: The normality test

Source: Authors

Probability 0.01 <0.05 H0 not proven, remains don't have normal distribution. JB 9.16> χ2

We assume that JB ~ χ2 is the distributor of an χ2 with 2 degrees of freedom

To check if any of the variables is hetero-scedastic is used Breusch-Pagan test, which is also controled with Breusch-Pagan test by building the model below.

$\hat{u}^2 = \delta_0 + \delta_1 Union + \delta_2 WHITE + \delta_3 Ed + \delta_4 Ex + \delta_5 ExSq + \delta_6 Married + error$

H0: $\delta_0 = \delta_1 = \delta_2 = \delta_4\ \delta_3 = = = \delta_5\ \delta_6 = 0$ (homo-scedastic model)

Ha: The model is hetero-scedastic

Test for hetero-scedasticity

TABLE 1: Breusch-Pagan-Godfrey Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	2.935620	Prob. F(5,131)	0.0152
Obs*R-squared	13.80372	Prob. Chi-Square(5)	0.0169
Scaled explained SS	7.032011	Prob. Chi-Square(5)	0.2183

Source: E-views

Based on sig=0.01 <0:05, there is sufficient evidence to refute the hypothesis based, model is hetero-skedastic. Based on the results of tests taken out above we noticed that there are problems with the remains distribution model. In this model except the age and income variables which are expressed by numbers, all other variables are variables coded to respond to 0 and 1. The theory suggests that if you are in this kind of model, with such features as previously described we should move from linear form in the log ones because in the logarithmic form, not having a normal remains distribution does not result in an invalid model. Because the dependent variable that is chosen for the study (pro or against transition from cash to bank money) can take only two values, pro or against analyzed data collected is used logistic model.

According to the literature review on dummy variables, log of track model cannot interpret coefficients or parameters as long as variables are coded in 0 and 1, the value before the variable is irrelevant for our study. For a better explanation of the model, will be used the marginal effects (the change in the predicted probability, when one of the independent variables change with a unit). In the end, the quality of predictive models will be tested through diagnostic tests. The logistics model is more convenient than the linear one, as it enables a more effective interpretation. The transition from cash to bank money for any increase in income is the same in linear model. While on the logistic, probability of transition from cash to bank money increases for any additional in income. Given that income > 0, placing it in the log reduces the hetero-skedasticity in the model.

Since the observations are independent, and the sample size is moderate, what are important conclusions in OLS is that all remains have the same variance and normal distribution.

If is used this assessment "robust / heteroskedasticity-consistent / Sandwich / Huber-EICKER-White" in the logistic model, the constant variance is not required.

TABLE 2: The marginal variables effect

Variables	Coefficients	Marginal effect
C	-29.243	-10.786
EDU	0.062	0.023
GENDER	0.572	0.211
AGE	0.006	0.002
KNOW	1.983	0.731
LNTR	2.519	0.929

Source: Authors

TABLE 3: Probability and coefficients

Variables	Coefficents	Stand error	Statistics T	Prability
C	-29.2429	6.08471	-4.80597	0
EDU	0.062259	0.477965	0.130258	0.8964
GENDER	0.572189	0.477102	1.199303	0.2304
AGE	0.005999	0.024011	0.249845	0.8027
KNOW	1.983196	1.433169	2.70149	0.0035
LNTR	2.519102	0.559318	4.503884	0

Source: Authors

The table noted that: Constant, KNOW and LNTR are important variables, judging by the values of the respective probabilities of the 5% level.

Equation

$LogND(P_i/(1-P_i))$= -10.786C+0.023EDU+0.211GENDER+0.002AGE+0.073KNOW+0.0929LNTR

The importance of the model:

- LR Statistics is preferable to be much higher, as LR statistics shows the importance of the model.

- The higher the R-squared McFadden, better model.
- Pseudo R-squared

TABLE 4: LR statistic

LR statistic	52.79933
Prob (LR statistic)	0

Source: Authors

TABLE 5: Pseudo R-squared

Pseudo R-squareds	
Efron	0.368092
McFadden	0.312655
Adjusted Mcfadden	0.241596
Cox-Snell	0.319819
Nagelkerke	0.451414

Source: Authors

This result shows that this model is better at predicting outcomes than it would be on the randomly expectations. From the above table have noted that a relatively high statistical probability LR with a P = value of 0.00. On the other hand we will see the R-squared is small. This combination, a high value of LR and a small amount of R-squared is a typical combination for models that explain the behavior of individuals. This means that this model cannot predict in a good way individual behaviors of respondents but it gives a better picture of population.

As in Ols to detect the percentage of accurate predictions from the model, we look to the left of the bell (probability distribution).Similarly with R^2 of linear regression model, a higher PseudoR^2 shows a better explanation of the predictions from the model estimated.

TABLE 6: Percentage of right and wrong predictions

	Evaluated equation			Constant equation		
	Dep=0	Dep=1	Total	Dep=0	Dep=1	Total
P(Dep=1)<=C	82	14	96	95	42	137
P(Dep=1)>C	13	28	41	0	0	0
Total	95	42	137	95	42	137

Correct	82	28	110	95	0	95
% Saktë	86.32	66.67	80.29	100.00	0.00	69.34
% Jo saktë	13.68	33.33	19.71	0.00	100.00	30.66

Source: Authors

From the above table it is observed that 0 (not accepting the transition from cash to bank money) is correctly predicted in 86.5% of cases, 1 (transition acceptance) is predicted correctly in 66.67% of cases. The model has correctly predicted 80.26% of cases, it is the best descriptive exponent of the importance of the model by comparing the above calculated pseudo R2.

Results Model

List of Abbreviations

ND – Dependent variable which expresses the desire of using the electronic money
KNOW- Independent variable which, knowledge of the main banking products
LNTR- Independent variable of income.
"KNOW" has a marginal effect of 0.731 which means that for the representative individual the probability of accepting the change increases by 0.731 when shifting from individuals that don't have knowledge about bank products to them who have, when other factors are held constant at 5%. It is apparent that more knowledge individuals have about banking products as well as how the banking system works the more they are inclined to accept and support the transition from cash in the bank

"LN" of revenue, the growth of income with 1% increases the probability of acceptance of change (the transition from cash to bank money) by 0.929 when other factors are held constant. The results obtained from field surveys summarized in the table above suggest that revenue growth increases the opportunity that individuals support this change. On the other hand it was noticed that individuals who have higher incomes are more willing to accept this transition.

From the above table we can see that the effect of age on the acceptance of change is quite small and quite without significant impact. However we see a positive trend, which means that as age increases the acceptance of passage increases to. This trend is somehow understandable as individuals belonging to the third age are very few in the group of respondents and based on rates is noticed that individuals over 60 years of age have a tendency of not accepting the change.

Gender variable, when shifting from female to male probability of acceptance of the transition from cash to bank money increases with 0.21. The survey suggests

that between men and women, are the men who are more inclined to accept the change. Men are known for the courageous nature and are more open to change and this fact is confirmed even in this study. Women are more doubtable to accept this change by stating that major changes (as considered by them) in Albania always came with negative consequences.

Education is another variable suggested by the theory that has a significant effect on economic changes. From the model we can distinguish that in these areas education has not had a significant effect, however, we can say that there is a positive correlation. Shifting from the low level of education (primary and secondary schools with) to the high-level (high school degrees) the acceptance probability increased by 0.023. Shifting from cash to bank money is more accepted by individuals with higher education.

Among individuals asked if they knew basic banking products such as current accounts and savings accounts, 25% of respondents replied that they knew these products while 75% said that they knew or possessed one of the accounts mentioned above. Most of those who said they did not know any of the above accounts that were surveyed, belonged to the third age.

Conclusions and Recommendations

The most used form of money today is electronic one. Electronic money means all activities done electronically, the result of which is the transfer of funds from one bank account to another. Today what is seen with interest is whether the Albanian citizens that live in peripheries have embraced the adoption of new banking technologies. Individuals who have knowledge of banking products or own a bank account are more likely to accept the change from cash into bank money. Based on this conclusion, it is recommended that: if this initiative or other initiatives will be undertaken, which are related to major changes in the payment system or banking, to achieve a high acceptance result, giving information on advantages and disadvantages of a product or service, by various tools, especially by groups that inform verbally, would be a factor that will have a positive impact. In regard to incomes variable it is achieved this conclusion, increase in incomes grows the possibility for individuals to approve a change in the payment system. Age variable seems to have little impact on the results obtained from the model but is noticed that individuals in the age group 30-50 years have a changing trend of acceptance about payment system higher than other age groups. Recommendation: it has to be worked on the tools and the information to reach other age groups that have a tendency of not accepting the bank technological changes. Men are those who are more inclined to accept bank technological changes, women appear more

withdrawn in accepting the change. Recommendation: The information forms which arrive and are more directed toward women who live in areas far from the centers would increase the percentage of acceptance of the transition. Education is a factor which affects almost every area of life and definitely affects the attitude that individuals with different levels of education, have towards the transition from cash money to bank money.

The high desire of the respondents to have a personal account speaks positively to accept changes in the payment form, are other factors, who do not allow this process to have the right fluency. The process of shifting from cash money in bank money is a process that should not be imposed because in areas far from centers, the percentage of individuals living a tough reality is even higher and as much as we try to accept the transition into the system of electronic payments the percentage of individuals who still find it difficult to meet basic needs with grocery list or borrowed money will not embrace this change.

It is suggested that this process might be prompted maximally, rather than imposed. If it is encouraging, this process should start spreading the information through the sources of information selected by the respondents as the main sources. Further information should be implemented in order to get the attention of the group ages that had difficulties on embracing the change. The form of information should be as simple as possible and more orientated to women.

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