

Market Intelligence Electronic Payments in Albanian – A Customer Payment Choice

GENTI BEQIRI

European University of Tirana
Tirana, Albania

Abstract:

Electronic payments in Albanian market are well developed in terms of technology that banks are offering but the number and volumes of transactions are still low. Suggestions that are coming from the literature review are indicating the critical factors, which need to be addressed in order to evaluate the entire electronic payment system of the country. According to the latest report of World Bank "Payment Systems World Wide", Albania ranks in last part of the mid-level electronic payment system for retail purchases in the same group as Sudan and Zimbabwe.

In such context, there is a lot of space for improvements in terms of user acceptability and card usage. This study will try to identify several problems implicating on one side merchants in terms of security, privacy and fees to be paid to the banks and in the other side consumer with their payment preferences and implication that they have when using electronic payments.

Lowering the cost of transaction processing and creating rewarding programs for the consumers are the two challenges for Albania market nowadays. Evaluating the results coming from the data analysis, in the end, a new model which can revolutionize the payment system by implication banks, merchant and consumes is proposed.

Key words: Electronic payments, banking transactions, customer choice.

1. Introduction

Electronic payment or e-payment is an electronic or digital

financial payment transaction between two or more parties, such as banking system, merchants or businesses and citizens. Focusing particularly on the Albanian financial environment, this exchange is usually performed through the internet using specific financial instruments such as debit/credit cards, pre-paid cards and electronic cash.

In Albania, the physical money (cash) is still the dominant instrument of payments in all areas. Latest reports from Bank of Albania show that during 2012, only 2.5% of all payments are performed electronically, which clearly indicates that electronic payments are still in the lowest levels compared to the EU, where electronic payments account for more than 50% of the total transfers. Even that the necessary technological infrastructure exists in Albania, as banks have invested in various terminal types like ATM, EFT-POS for card processing, and the usage of cards is significantly lower compared with the other countries in the region. From a historical perspective, over the 20 years, Albania has never reached an extensive and consolidated market of electronic payments. Although the new financial products, including credit and debit cards, were rapidly introduced by the banks, building an effective system of electronic payments is still a challenging task for the country.

There has always been a deep-rooted notion that since cash is something tangible, it provides a sense of security, which in fact, it is not true. In 2003, the government started the new campaign for the use of credit cards, by focusing only on the employees of the government institutions. The employees were receiving the salary directly from their bank checking account and a free debit card was guaranteed to them.

The initiative was a driving motive for people to open bank accounts as well as the first step towards the use of electronic payment instruments. Unfortunately, the data show that the Albanians still do not use their bank accounts, neither electronic payment. Moreover, it is quite normal to see people

waiting in lines in front of the bank teller to withdraw from their accounts all their monthly incomes. Credit cards are even less used, as in Albania it is not a common practice yet, to borrow from the bank; people usually tend to buy goods with their own money. But on the other hand, the usages of cash has higher costs and possess several problems like the risk of theft, falling victim to the use of false banknotes, even spending time waiting in a queue to withdraw the money or make payments in cash. Various problems are observed on the business side also. They usually prefer the payments in cash rather than using electronic cards. Even when the Albanian consumers are willing to use their debit or credit cards for payments, there are a lot of cases when the payment is refused by the merchant.

Focusing on the Albanian market, this problem must be investigated on both sides, merchants and consumers. Informal economy, which is based on cash payments, is one of the main concerns for the country as it leads to tax evasion.

According to the latest report of World Bank "Payment Systems World Wide", Albania ranks in last part of the mid-level electronic payment system for retail purchases in the same group as Sudan and Zimbabwe. In such context, there is a lot of space for improvements in terms of user acceptability and card usage.

Empirical studies show that a country could save 2-5% of its GDP, if the electronic payments account for more than 80% of all payments. An electronic payment system is not only cost efficient, but also produces transparency and strong monitoring mechanism for the tax system.

A wide use of electronic payments through various businesses would help businesses themselves through lower administration costs and would significantly improve the tax system in Albania by reducing the tax evasion.

Even this investment in Cards and Terminals is according to the latest technology, the usage of cards is lower

comparing with the countries in the region.

The Cash payments in Albania are still foremost element of the market. According to the Bank of Albania cash and check are covering 97.5% of all payments in Albanian Currency “LEK”. This percentage is very low compared to the EU countries in which the percentage is above 50%.

Considering the benefits of electronic payments, the aim of this research is to initially identify the main reasons why the usage of cards is still low in Albania and propose a model to increase the cards usage by involving the three core entities: banking system, merchants and consumers. This project is highly motivated as it will have a positive impact in the Albanian economy and will facilitate merchants and cardholders to accept and use electronic payments card.

2. Payment instruments in Albania

2.1 Payment Instruments

Albania's most used payment instruments is cash. Checks or other paper based method are not used or used very rarely. Banks also offer card based services to their clients issued through the International Switches that they process outside the country. The major part of the banks offers Debit (Maestro, Visa Electron, and American Express) and Credit (Master Card, Visa, and American Express) cards.

Table 1 shows the E-banking products offered by the commercial banks in Albania.

Electronic products	2006	2007	2008	2009	2010	2011	2012	Total
Debit cards	6	4	2	2				14
Credit Cards	5	3	1	1	1			11
Maestro (Debit) cards	1		1	1				3
Maestro (Credit) cards	0		1	2				3
Visa (Debit) cards	0			1				1
Visa (Credit) cards	0			1				1
MultiCash	1							1
ATMs	6	4	2	2				14
POS	1	2	2	1				6

Internet banking	2	2	3	2	2			11
Phone banking	0	0	1					1
Mobile banking / SMS banking	0	0	1	1	1	1	1	5
Prepaid Card	0	0				1		1

Table 1: e-banking products approved by the Bank of Albania (2006-2012)

Source: Bank of Albania

The absence of a National Processing Center (central host), leads the banks to process their transactions through Visa, MasterCard and American Express switch. The entire payment process is associated with high charges, for each and between banks, which is translated into high costs. Due to the bureaucracy of this payment system and to the high costs, there are several initiatives from banks offering online banking, for a unified infrastructure in the interbank payments, but with no tangible effort. Table 2 gives a picture of the distribution of the e-banking products.

Banks	ATM	POS	Internet Banking	Phone Banking	Mobile /SMS Banking	Electronic (Debit, Credit) Cards
Raiffeisen Bank Albania	✓	✓	✓		✓	✓
National Commercial Bank	✓	✓	✓		✓	✓
Tirana Bank	✓		✓	✓	✓	✓
National Bank of Greece Alb.	✓					✓
Alpha Bank Albania	✓	✓	✓			✓
ProCredit Bank Albania	✓	✓	✓			✓
First Investment Bank Albania	✓		✓			✓
Credins Bank	✓	✓	✓			✓
Union Bank	✓		✓		✓	✓
Societe Generale Bank Albania	✓		✓			✓
Intesa SanPaolo Bank Albania	✓	✓	✓			✓
Veneto Bank Albania	✓		✓			✓
International Com. Bank	✓					✓
Credit Agricole Bank Albania	✓					✓

Table 2: Distribution of e-banking products/services by commercial banks as at end-2012

Source: Bank of Albania

A number of about 827 ATMs is counted in the territory and with around 5211 EFT/POS devices which process around 1.000.000 Cards. There is a high cost incurred by the business community as a result of a slow payment process, in terms of both money and time. These impediments in the payment services increase noticeably transactions costs, and moreover they affect the business opportunity environment in Albania. The amount of cash in circulation outside the banking system is still on high rates which lead to limited funds for crediting the business community, which in turn leads to higher interest rates and therefore affects the whole economy.

The most used electronic payment instruments are:

a. Debit cards

Debit cards are the most widely used electronic payment instrument in Albania. Referring to the Bank of Albania statistics, the number of Debit cards in 2011 was 693,958. The debit card is connected directly with the account of the cardholder and is usually used to withdraw the salary from the Automated Teller Machine (ATM) but since the card is taking the application of international schemas like Visa Electron or Maestro it can be used to purchase for the online stores. Debit cards are processed as debit transaction in the card processing system. This instrument is used more in ATM and in Electronic Fund Transfer (EFT) POS devices.

b. Credit Card

Credit card does not require for the cardholder to have money in his/her bank account and it offer to use the banks credit. The credit money are used for 15 day without paying nothing to the bank and after this period if the cardholder do not pay the fee agreed with the bank, usually there are penalties applied to the account. Credit cards are the most used electronic payment instrument worldwide (Hsieh 2001; Chou et al. 2004), but in Albania it is used less than debit card. Regarding Bank of

Albania the number of credit card payments in 2011 was 37,893 so it is approximately 18 times less than debit cards. Credit card in Albania are used more in EFT POS for payments usually in the retail market and rarely in ATMs because of the high cost associated for the withdraw from the ATM .

c. Online Banking

This instrument is offered from the major part of the banks in Albania and it gives to the customers the possibility to conduct the financial transactions over a secure web site. The usual transactions that the bank customers can perform via web are: funds transfer (nationally and internationally), utility payments and exchange. The trend of using online banking in Albania has started after 2008 and is increasing rapidly during the latest years. The number of online banking users in 2011 referring to the statistic of Bank of Albania had reached the number 187,286.

d. Direct Debit

This instrument is offered from the banks usually for paying utility companies like electric company, water utility company mobile operators etc. Banks offer facility to their customers to schedule automatic payments in order to pay the bills automatically (or manually) from the customer account. In 2011 the number of Direct Debit Customers referring to the Bank of Albania was 89,188.

e. Prepaid Card

This type of card is similar to the debit card with the difference that Prepaid card do not have the name of the account holder, written on the card. This instrument was issued in only one bank during 2011.

2.2 Payment terminals

The financial terminals in Albania are installed after 2000. Starting from 2004 and till 2012 in Albania are installed only two types of terminals ATM 'sand POS's.

Automated Teller Machine (ATM)

The first ATMs in Albania are installed during 2004 and till 2012 are counted 827 installed ATM's in all the Albanian territory. ATMs have facilitated the banks and their clients for the cash withdrawal function. These devices are installed with two options:

- 1) ATMs with cash withdrawal function only
- 2) ATMs with cash withdraw and deposit function.

Although the deposit function exists, it is not active and applicable for the users.

Almost 95% of the ATM 's in Albania accept Visa, MasterCard of both and only 5% of the total accept domestic card (proprietary card issued from one bank which are used only in issued bank terminals). Before 2008, the ATM's were processing only magnetic stripe card and the authentication was done with PIN (personal identification number). After 2008 because the high number of frauds in Europe, Visa and MasterCard decide to migrate in a new technology which uses chip instead magnetic stripe to store the information in the card. Albanian banks have followed the chip card migration which implicated both ATMs (in order to proper read and to process chip information securely) and in the issuing part by replacing the magnetic stripe card with chip cards. The chip card technology or as called smart card technology gives the possibility to write the information in embedded integrated circuits which has the needed features to read and write and store the information encrypted in the card. This method offers again the PIN to make the authentication.

Knowing the fact that in Albania, Albanian LEK and

Euro are the most used currencies, banks are offering both EURO and LEK to be withdrawn from the ATM.

Banks have installed their ATM infrastructure in the branches and they are filled off-site with the cash by banks staff. Using an Visa or MasterCard brand cardholder are able to withdraw cash in the bank that have issued the card or in other banks that are accepting Visa or MasterCard but in this case an interchange fixed of 500 LEK fee is applied.

Electronic Fund Transfer –EFT POS Terminals

EFT-POS terminals are firstly installed during 2004 in Albania market and till 2012 there are 5211 terminals installed. These terminals are accepting Visa, MasterCard, American Express and domestic card. The same as in ATM case, EFT-POS terminals before 2008 were reading only magnetic stripe card than the bank started to migrate in chip base transaction which impacted the card replacement and the new capabilities in the terminal software and hardware to read chip cards.

The major part of the merchant are using POS terminals for purchase function but EFT–POS terminals are offering in the same time other facilities like pre-authorization (which is used mostly in hotel to block an amount of money which servers as guarantee when they reserve a room and then when the client leave, the amount of money is unblocked and transferred to the merchant account), cash back (this option is used when the cardholder decides to transfer the money from the card and to receive cash instead) mail –order etc.

EFT-POS terminals certified from Visa, MasterCard and American Express can accept all the correspondent cards without charging the cardholder when the payment is performed. Since the deployment of the infrastructure happened rapidly during 2004-2012 banks were not organized to invest in a common infrastructure so they invested in their own infrastructure by increasing the cost of the payments. This situation is evident in the shops nowadays were we can find

several POS accepting the same schema from different banks.

	2004	2005	2006	2007	2008	2009	2010	2011	2012
ATM	93	205	309	433	642	741	771	805	827
POS	155	779	1234	1832	2953	4370	4903	5126	5211

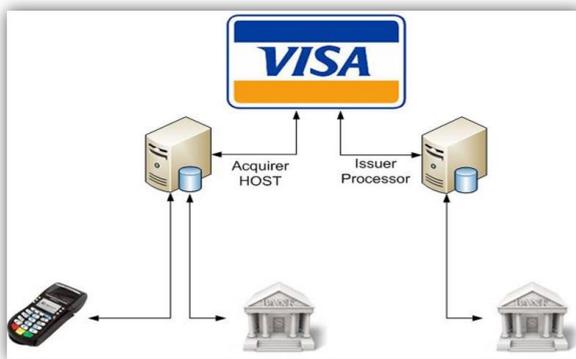
Table 3: Terminal installed during last years

Because of the high costs and the high dependence of the current schema, a couple of services are not offered yet from the banks .E.g. bill payment facility in ATM or POS, fund transfer or virtual card.

3. Literature Review

The existing model for payments in Albania includes several players which define the fees for the transaction processing. The below is the schema shows how the players interact with each other.

Schema 1



Definitions:

Acquirer Bank. This terminology is used for the banks that possess the infrastructure for making a payment. This infrastructure can be an ATM, POS device, Mobile device or e-Commerce infrastructure to accept payments through the web

.Usually the ATM belongs to the Acquirer bank and they are installed within the branch (in some rare case they are installed off-site), while the POS devices are installed in the merchant premises. The acquirer bank give for free the POS terminals to the merchants and they charge in the percentage of the volume of the transaction. This percentage varies from 1.8 % to 4.5% depending on the bank, Payment Schema (Visa or MasterCard charges) and it depends as well in the volumes that the merchant performs monthly (the higher the volume the lower the charges).

Acquirer HOST. ATM, POS devices or other EFT (electronic fund transfer) devices (or e-commerce) are connected with Acquirer Host and exchange messages with each other, so called transactions. These financial non-banking institutions offer the infrastructure for authorizing a transaction which can be initiated from a merchant in case of POS device or from the cardholder in case of ATM devices. In Albania this service is offered outside the country from the international card processors. Acquirer are responsible to interact with the messages system with the Electronic Fund transfer Devices to validate the security code PIN, authorize or reject the transaction and to notify the Issuer Processor and Acquirer bank if the transaction is completed or rejected.

Issuer Bank. The issuer bank usually is called the bank that issues the cards. The card issues can be Credit card, debit cards, Prepaid Card or Virtual Card etc. According to the Bank of Albania statistics the major part of the cards are branded with Visa, MasterCard, Maestro and a very low percentage is branded with American and Local Cards.

Card numbers according to the functionality	Years								Year 2012	
	2004	2005	2006	2007	2008	2009	2010	2011	1st Qrt	2nd Qrt
1. Debit Cards	33,288	217,799	229,021	427,430	482,072	543,141	667,548	693,958	697,489	704,929
2. Credit Cards	806	2,686	9,754	10,439	15,246	22,793	27,300	37,893	40,329	43,516
Total	34,094	220,485	238,775	437,869	512,23	565,934	694,848	731,85	737,818	748,445

Card numbers according to their type	Years								Year 2012	
	2004	2005	2006	2007	2008	2009	2010	2011	1st Qrt	2nd Qrt
1. VISA	NA	NA	NA	NA	436,479	486,943	582,248	602,944	603,866	606,993
2. MasterCard	NA	NA	NA	NA	51,926	63,119	78,257	100,375	105,024	114,805
3. Maestro	NA	NA	NA	NA	0	2,771	17,620	16,871	17,464	19,180
4. Local Cards	NA	NA	NA	NA	20,405	7,887	10,865	7,425	7,623	3,948
5. AMEX	NA	NA	NA	NA	3,422	5,214	5,858	4,236	3,847	3,519
Total					512,232	565,934	694,848	731,851	737,824	748,445

Table 4: Cards Activities carried out by the banks through the years

Source: Bank of Albania (www.bankofalbania.org)

Issuer Processor. These are service provider companies that facilitate the banks to offer issuing services for their cards. Most of the time, Albanian banks operate with an issuer and an acquirer that are the same company. The issuer processor keeps the account balance online for the member banks cardholders and instructs with the messaging system to authorize or reject the transaction (e.g. in case the account do not have enough money for authorizing the payment). This service is offered outside the country.

International Card Schemas. Explaining the transaction flow in the above schema, VISA is used as an intermediate entity but it can be any other payment schema (MasterCard, AMEX, CUP etc). The role of card schemas is to serve as a gateway between issuers and acquirers. This service is offered to the bank with some charges which are related with the issuer of the card or with the amount of money processed (in case of acquirer). Usually these are fees that the merchant banks (acquirer) pay to the cardholder's bank (issuer), but there are specific cases that the interchange fee is paid from issuer to acquirer. This is called reverse interchange.

4. Research and findings

Electronic payments play an important role in the development of the banking sectors and have positive effects in the country economy. Different studies show that even that these services aren't the most profitable service that banks offers, various benefits are obtained if they are used properly. Hirtle (2007) and Hirtlec & Stiroh (2007) have discovered an important link between retail focus in US banks and bank stability, even that it was not a very profitable service and the return from the service was low. In the same time banks incomes from the payment technology are not only of the direct fees that are gained from issuing and acquiring processes, but in addition banks that have good payment services attract more clients in other services like deposits etc. Kemppainen (2003). Berger and DeYoung (2006) show that geographical expansion of the banks is facilitated from the technological progress such as ATMs and POS terminals, which can reduce the cost over the time Berger et al. (1996).

In order or manage the small-denomination and coins, Bank of Albania and private banks spends lot of money to handle them. Electronic payments are giving a great advantage in decreasing the demand for small denomination .So if the people use more and more debit or credit cards the lower will be the demand for small-denomination and the greater will be the retail market consolidation (Amromin, & Chakravorti 2009). Other researches show that (e.g. Zandi and Singh 2010) there is a strong connection between electronic retail payments instruments and economic growth. Hasan, De Renzis and Schmiedel (2012) have perform a research in 27 European countries between 1995-2009 and the results confirms that the migration from CASH payment to the electronic payments stimulates the entire country economy.

One of the critical parts, when an electronic payment is performed is the willing of the merchant to accept the payment

electronically. In order to determine why the merchant sometimes don't want to accept the electronic payment and why the cardholder don't insist to pay with debit or credit card, various studies are performed based on the experience of other countries. Usually an electronic payment happen if the merchant and consumer agree to use this method of payment. In a competitive environment, usually merchants tend to offer this possibility to their customers.

Except the marketing done from the banks and the culture of the merchant for accepting electronic payments, the most critical part of this process are the fees (or so called Merchant Discount Rate MDR) that merchant pays when accepting an electronic payment. If the merchant will set different prices for the same product of service based on the payment method that cardholder will choose (cash or card), liquid consumers will choose cash over cards (e.g credit cards). There are different views if the price for the same product and service when consumers pay with different payment instruments should be different (Chakravorti 2003). Chakravorti and Emmons (2003) in their study suggest that different pricing strategies improve the welfare in competitive markets. Instead Rochet and Tirole (2002) suggest that if this pricing policy will be in place, then it will not be a welfare enhancing.

In order to clarify when the merchant is more disposed to accept the electronic payment we have to explain what are the costs and benefits when using electronic payments. According to a Canadian Survey, (Arnago, & Taylor, 2008) when a merchant decides to accept CASH or electronic payments he/she should think about the costs and benefits on both ways of payments as shown below:

	For all payments	Unique to cash	Unique to cards
Costs	<ul style="list-style-type: none"> • Bank account fees • Tender time at the POS • Access to funds (float) • Risk of fraud or loss • Set-up costs 	<ul style="list-style-type: none"> • Back-office reconciliation and deposit-preparation time • Deposit/ordering fees • Transportation • Secure storage • Security measures / insurance 	<ul style="list-style-type: none"> • Processing fees • Network reliance • Equipment, software, and telecommunications • Charge backs • Rules and regulations • Payment non-finality
Benefits	<ul style="list-style-type: none"> • Facilitate transactions • Accommodate consumer choice • Reliability/convenience • Competitiveness 	<ul style="list-style-type: none"> • Liquidity • No explicit per-transaction fees 	<ul style="list-style-type: none"> • Increased sales • Electronic bookkeeping • Loyalty programs • Cash back service • Funds transfer

Table 5. Costs and Benefits for different methods of payments
Source Bank of Canada

Chakravoti and To (2007) in their study assumed a competitive good market and they identified that credit card instrument can increase sales. This happen because purchases and incomes vary over time. In this study they demonstrate that the merchant welcomes the electronic payment if the margins are relatively high and the cost of funds are low .In addition Chakravoti and To (2007) discussed the costs and benefits of credit cards on a network of participants and investigated merchant pricing policy, merchant acceptance ,interchange fee and network competition. Rochet and Tirole (2002) suggest that merchants accept the payment card only at a certain threshold of the interchange fee, otherwise they rejected the payment.

Consumers on the other side are the most important part of this process in order to make the payment system to start working. In order to evaluate which are the factors that drive consumer to pay with card, several authors have performed different studies. Based on the Federal Reserve’s Survey on Consumer Finance, two authors Kennickell and Kwast (1997) discovered that the level of education and financial assets influence and stimulate the Electronic

Payment. Kennickell and Kwast (1997) found that consumer with higher incomes in particular liquidity, are the most critical factors that influence the chosen payment method. Based on this findings the consumer is not only influenced which payment method to use (cash or electronic payment) but also the availability of the payment instrument.

Mantel (2000) in his paper have discovered that not only consumer wealth is a critical factor to decide what method of payment the consumer will use, but there are also two additional factors like **Personal Preferences** and **Transaction Specific Factor**.

Regarding Mantel (2000) Personal Preferences are divided in five categories when making a payment:

- Consumer wants to have always control over their payments.
- They want budget and control better they expenditures.
- Incentive and lower cost.
- Convenience when making a payment
- Privacy and Security.

While Transaction Specific Factors are depending on the specific transaction when that payment is made in relation to the merchant.

After Kennickell and Kwast (1997) and Mantel (2000), other authors have performed several studies that confirmed that electronic payment have several favorable characteristics like convenience, reliability, security, acceptability, privacy, efficiency, anonymity and scalability (Kousaridas et al. 2008, Stroborn et al. 2004, Linck et al. 2006, Cotteleer et al. 2007, Tsiakis and Sthephanides 2005, Chou et al. 2004). Hayashi and Klee (2003) bring some other evidence that the invention of new technologies contributes to increase the likelihood of using electronic payments especially in e-commerce payment. They discovered as well that transaction value and physical characteristics and point of sales can influence the payment method.

One of the major issues when consumer agrees to pay electronically is the security. Even electronic payments have a number of advantages over the traditional cash or check payment they should be free of security issues in order to be acceptable from the consumers Linck et al. (2006). Kima et al. (2010) identified that the security of electronic payments depends on five factors such as system factors, technical infrastructure, implementation, transaction factors (secure payment regarding the security specific rules) and legal factors. Despite the security measurement that banks have taken even in the most developed countries, still exist other instruments like cash and other paper based. In order to increase the usage of the electronic payments issuer banks have launched reward programs. These programs calculate the amount of electronic money that consumers spends in specific retailers shops and for specific threshold of that consumer spends these programs give back as a reward an amount of electronic cash or specific gifts in the retailers shops. Hsee et al. (2003) in his study have shown that incentive programs applied when consumer make purchases, in general have a great impact and increase the sales. Heilman et al. (2002) again in his study shows evidence that when a consumer notice for the existence of cent off coupons while purchasing one or more products, the consumer attitude is that he/she is not only buying the products but they enhance their spending overall. Other authors like Ching and Hayashi (2010) and another study performed in Australia from Simon et al. (2010) show that reward programs have a positive effect in consumer payment instrument choice.

5. Conclusions and recommendations

Considering the literature review and findings we can conclude that Albanian payment system have two major problems:

- 1) Merchant are not stimulated properly in order to accept electronic payments by offering lower fee from the banks

and

2) Consumers are not stimulated properly by offering reward programs from the issuing banks.

This causes that merchant and consumer to prefer more cash than cards as an instrument for payment. This behavior is having an impact in the entire economy.

The question that can be raised is how the banks can lower the MDR knowing the fact that a huge portion of the percentage is dictated from Visa and MasterCard?

In this situation the only solution remains to establish an entity called local payment processor which will issue and process domestic card which should be under the control of a group or all Albanian banks. In this case the cost of issuing and processing the domestic card will be dictated from the local entity.

Domestic card will process only in those banks participating in the switch/processor. It will be an issuer and acquirer in the same time (only for domestic cards) and will have the capability to personalize domestic card using magistrate and chip technology. The ATM and POS device and Web Merchants should be connected to the schema in order to process these cards.

The major part of the banks should be connected in the domestic processing center or “Albania Processing Center” (APC) and only the card that are issues from those bank will be processed in the APC Visa or MasterCard transaction will be routed from APC in the corresponded international hosts and depending of the card they will route the transactions in VISA or MasterCard.

Based on the literature review findings if the electronic payment system will process more volumes in terms of sales, will help the merchants to reduce the cost of handling the cash (seeing also from the security perspective to protect the cash inside their facilities), consumers convenience, impacting positively the profit of the banks offering it and in the end it

will have a high impact to the entire economy of the country.

BIBLIOGRAPHY:

- Amromin, G. and Chakravorti, S. 2009. “Whither Loose Change? The Diminishing Demand for Small-Denomination Currency.” *Journal of Money, Credit and Banking* 41(2/3): 315 – 335.
- Berger, A. N. and De Young, R. 2006. “Technological Progress and the Geographic Expansion of the Banking Industry.” *Journal of Money, Credit and Banking* 38(6): 1483 – 1513.
- Berger, A. N., Hancock, D., and Marquardt, J. C. 1996. “A Framework for Analyzing Efficiency, Risks, Costs, and Innovations in the Payments System.” *Journal of Money, Credit and Banking* 28(4): 696 – 732.
- Chou, Y., Lee, C., and Chung, J. 2004. “Understanding M-commerce payment systems through the analytic hierarchy process.” *Journal of Business Research* 57(12): 1423–1430.
- Hirtle, B. 2007. “The impact of network size on bank branch performance.” *Journal of Banking and Finance* 31(12)L: 3782 – 3805.
- Hirtle, B J. and Stiroh, K J. 2007. “The return to retail and the performance of US banks.” *Journal of Banking and Finance* 31 (4): 1101 – 1133.
- Hsieh, C. (2001. “E-commerce payment systems: Critical issues and management strategies.” *Human systems management* 20 (2):131.
- Iftekhar, H., Tania, D. R., and Heiko, S. 2012. “Retail payments and economic growth.” Bank of Finland Research Discussion Papers. (Source - Bank of Finland <http://www.suomenpankki.fi/en> ISBN 978-952-462-806-8, ISSN 1456-6184)

- Kemppainen, K. 2003. “Competition and regulation in European retail payment Systems.” Bank of Finland. Discussion Papers No. 16.
- Rochet, J. and Tirole, J. 2003. “Platform Competition in Two-sided Markets.” *Journal of the European Economic Association* 1(4): 990-1029.