

Mobile Platform for Financial Inclusion: the Case of an Unsuccessful Pilot Project In Brazil

Prof. Eduardo Henrique Diniz
eduardo.diniz@fgv.br
FGV-EAESP – Brazil
Fundação Getulio Vargas

Prof. Adrian Kemmer Cernev
adrian.cernev@fgv.br
FGV-EAESP – Brazil
Fundação Getulio Vargas

Prof. João Porto de Albuquerque
jporto@icmc.usp.br
Department of Computer Systems (ICMC)
USP - Universidade de São Paulo, Brazil

ABSTRACT

This paper presents an investigation of a pilot project that implemented a mobile payment platform in a poor community in Brazil. This project involved the creation of a network of organizations that includes a local microfinance institution, a large retail bank, a mobile phone operator, an international credit card company, and an acquirer, as well as small local merchants. The paper describes the process in which this platform was created and how it was maintained until it failed, one year after starting. Two conceptual approaches were combined for developing a theoretical understanding of this pilot project first to describe the process of inter-organizational network establishment and second to analyze its evolution during its first year of operation. The study points to the critical role played by governance processes, the environmental dynamics and how it can compromise the success of establishment and maintenance of such inter-organizational networks.

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INTRODUCTION

With the current ubiquity of mobile telephony, mobile payment platforms have the potential to change the landscape of monetary transactions. Access to mobile devices is widespread in contrast with the much more limited access to traditional financial services such as bank accounts and savings. For this reason, mobile payment is regarded as a key instrument in improving financial inclusion by opening up opportunities for lowering the costs of services that are offered to the financially underserved in society (Alampay e Bala 2010; Duncomb e Boateng, 2010).

Mobile payment systems are, by their very nature, based on a network of companies which have different approaches to the market and are regulated by specific areas, such as the financial and telecommunications sectors. For this reason, the mobile payment system environment is generally treated as an “ecosystem”, in which various industrial firms have to “negotiate the exchange of their complementary resources and capabilities in order to provide a mobile payment platform” (Gaur and Ondrus, 2012:171).

The establishment and management of the highly complex and interdependent networks behind the mobile payment platforms is a considerable challenge. These include the continuous emergence of new technologies, a lack of clarity in the regulatory framework, and the problem of accommodating competition rules that apply to a wide range of market sectors. Another important factor to be considered is the demand side: the public acceptance of new ways of payment is deeply intertwined with cultural attitudes to money. As Maurer (2012) points out, people tend to adapt and modify existing payment systems as their experience with mobiles and money grows, rather than simply adopt a new system for value transfer and storage.

With the aim of contributing to research in the area of mobile payment platforms, this paper investigates a pilot project for a mobile payment service that was implemented in a poor community in Brazil but was ultimately unsuccessful. The study about how this project was carried out leads to the question: “What are the challenges of creating and maintaining a highly diversified network of organizations to develop a mobile payment platform designed for financial inclusion?”

This paper is structured as follows: the next section examines the relations between mobile payments and financial inclusion, as well as potential innovations in mobile payments. The

second section describes the conceptual approach that is applied in this study. The third and fourth sections introduce the Brazilian case and explain why it should be considered to be relevant to many other situations related to mobile payments and the research strategy. The fifth section analyzes the results of the field research while the sixth section includes a discussion based on the findings of the study. The paper ends with some concluding remarks and a list of references.

THEORETICAL BACKGROUND

Mobile Payment and Financial Inclusion

An investigation of mobile payment platforms can be undertaken in various research areas, since there are many different models that come under the same generic denomination. Apart from variations in the names of the application offered, such as mobile money, mobile wallet, and mobile banking, a mobile payment platform can also vary in terms of who transacts with whom, and offers models like P2P for transactions between two people, or B2C, for transactions between a person and a business, for example (Ramada-Sarasola 2012).

In this study, we will focus on how mobile payments can be employed as a platform to provide financial inclusion. The potential use of mobile payment for financial inclusion is usually linked to studies of mobile platforms in developing countries, which have attracted attention and grown in importance in the last 10 years (Diniz et al. 2011; Duncombe and Boateng 2009). Despite the well-known successful cases of Kenya and Philippines, the question as to whether mobile payment systems can really work as a means of providing banking services to the unbanked still remains open, since these famous cases seem to be more exceptions than the general rule.

On the one hand, a strong case can be made that, in countries where mobile devices are often more widespread than bank accounts, financial services are more easily provided through this channel. In addition, for the low-income population, who usually find it a struggle to obtain access to a bank branch and financial services, transactions through mobiles can become an attractive alternative to the problem of banking access (Bader and Savoia, 2013). Since there are many people who lack a regular income and there is a perception on the part of the “unbanked” that a bank account is unnecessary or too expensive, the mobile platform should be a solution

since this model does not usually close down as a result of inactivity. It is built on a pay-per-transaction basis, and avoids the risk of carrying cash on one's person (Tchouassi 2012).

Research financial services delivery through mobile devices in developing countries, where it makes more sense to think about financial inclusion, has tended to concentrate on practitioner involvement, which is a concept that has been too narrowly defined (Duncombe and Boateng 2009). On the basis of an investigation of 46 studies, the authors found that only six actually addressed the issue of the impact of mobile payments at a local level and just one that looked at their impact at a macro level. Furthermore, these studies do not draw conclusions that can help to provide a conceptual explanation as to how mobile payment affects economic development. Another study that has significantly increased the number of papers analyzed reached similar conclusions (Diniz et al. 2011).

As well as the uncertainty of the role that mobile payment will play in supporting financial inclusion and thus in fostering economic development, there are several regulatory issues raised by employing the mobile environment to provide financial services. In Kenya, for example, the banks complain that mobile operators are unfairly competing against them (Tchouassi 2012). Regulating the mobile payment services is indeed a very complicated matter since it groups together many disparate areas of financial services, mobile devices, consumer protection, data privacy, and IT regulation (Kemp 2013).

Despite the regulatory complexity and uncertainty about the impact on financial inclusion, mobile payment is often viewed by many companies in developing countries as a scheme that should be implemented to increase access to banking and financial services for the poor. As pointed out by Maurer (2012:600), "mobile money is changing mobiles, money, the people who use and transform both, the people and institutions that set out to foster financial inclusion and, possibly, the paradigm of financial inclusion itself" since "a vast array of agencies, technologies, individuals and organizations all concerned with money, another consumable communications media, potentially remaking money in the process" (2012:590). In defining the elements that form the concept of mobile money, this author cites the emergence of divergent narratives told by different players involved in this complex environment. These narratives found among players that seek to become partners in a platform project, are illustrative of how hard it is to create a common understanding regarding the full potential of a mobile payment market.

The study of the implementation of a mobile payment platform in Brazil, in particular one that was designed to cater for the poor and unbanked, can throw light on the difficulties and opportunities of this project and thus open up a discussion on how to make such experiences successful in other cases and countries. As Maurer (2012:601) states, “systems created in or for the developing world are serving as models for reimagining money, finance and payment in the developed world.”

CONCEPTUAL APPROACH

Given the complexity of establishing mobile payment ecosystems, our research question in this study is: “What are the challenges to create and maintain a diversified network of organizations to develop a mobile payment platform concerned with financial inclusion?” This question can best be investigated by combining two conceptual frameworks: the multilevel framework created by Pozzebon et al. (2009) and the framework for understanding platform-based ecosystems created by Tiwana et al. (2010). In this next section, we outline the two conceptual frameworks.

The multilevel framework was conceived in 2007 to orient a team of researchers working with two research programs: (1) the use of the Information and Communication Technologies (ICT) for financial inclusion and (2) the use of ICT for local and sustainable development. This conceptual approach was first published as a chapter in a book in 2009 (Pozzebon et al, 2009), and since then has been altered and refined by different researchers in Brazil and Canada (Pozzebon and Diniz, 2012).

The multilevel framework is governed by three theoretical perspectives: contextualism, social shaping of technology, and the structurationist view of technology. Contextualism and its three dimensions – context, process, and content – provides the frame in which four main concepts, (selected from the social shaping of technology and the structurationist view of technology), are integrated: these concepts are relevant social groups, interpretive frames, mechanisms of negotiation and change, and technology-in-practice.

The framework for understanding platform-based ecosystems was first established by Tiwana et al. (2010) and provide research and theories with the aim of explaining the evolutionary dynamics of these ecosystems. Based on the premise that the emergence of software-based platforms is shifting competition towards platform-centric ecosystems, the authors proposed a

framework for analyzing these ecosystems through an understanding of three related dimensions: architecture, governance, and environment. The dimensions of architecture and governance are considered to be endogenous because they are under the control of the platform owners. However, the environmental dimension is considered to be exogenous because it is not under the direct control of the platform owners.

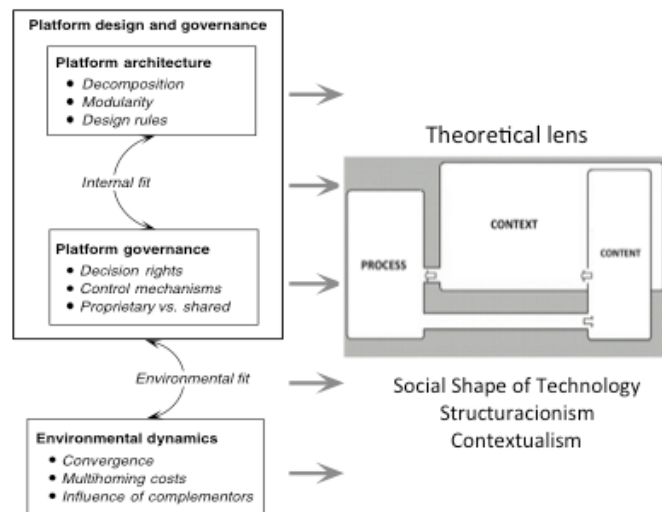


Figure 1: Conceptual approach employed in this study

The combination of the two frameworks (Figure 1) will provide a better understanding of the case, and give a good explanation of how it was created, how it operates and how it will evolve in the future. The multilevel framework will be helpful to understand how the mobile payment arrangement was established and how it operates. In the same way, the platform ecosystem will help us to anticipate the potential of this particular model in the near future, on the basis of its future direction. Whereas the multilevel framework helps to understand the interpretive frames within the organizations involved in the process of creating the platform, the platform design and governance framework raises the issue of what can be understood about the governance and the environmental dynamics of the mobile payment platform. Both frameworks together offer an appropriate conceptual approach for this study and can thus enable us to answer our research question regarding the case of a failed mobile payment project in Brazil, which is described as follows.

THE BRAZILIAN CONTEXT

Estimates indicate that 55 million Brazilians have no access to formal financial services in the country (Febraban, 2012); this corresponds to approximately half of the economically- active population. In contrast, the mobile access density was 1.35 per capita, and reached 265.7 million active lines at the end of June/2013 (Anatel, 2013). It is estimated that most of the underbanked population already has access to mobile telephony, which creates opportunities for financial inclusion through mobile financial services,.

Brazil also has a successful Conditional Cash Transfer (CCT) program, which forms a part of the Bolsa Família Program (BFP). This scheme has more than a dozen million families being granted state social benefits and has attracted worldwide interest (Lindert et al., 2007). The success of the Bolsa Família program is largely credited with being responsible for implementing the corresponding banking network system (Diniz et al 2012; Kumar et al. 2006), since 70% of all of the Bolsa Família payments (Banco Central, 2011) are made through this channel. In practice, Caixa Econômica Federal (CEF), the public bank employed by the Ministry of Social Development (MDS), carries out BFP payments through its corresponding banking network, and operates in partnership with a wide range of organizations (post offices, lottery shops, pharmacies, small grocery stores, supermarkets, real estate offices, and microfinance institutions) and in regions with low access to traditional banking channels. Since this program serves around 13 million families, a successful system for delivering the BFP through a mobile payment platform, should create one of the biggest users for this type of mobile application in the world with almost 13 million families using the system every month (Brandão, 2011). It should be noted that the Bolsa Família card is just a cash card that is not linked to a checking account, and does not allow financial transactions beyond the full withdrawal of the benefit received by the citizen. Thus it does not serve as a debit or credit card.

Since the mobile payment platform for the delivery of benefits, such as CCT, has recently been introduced into other countries (Mas e Radcliffe, 2010) with a view to constructing a mobile payment platform for the low-income population as in Brazil, it could benefit from the successful experience of BFP (de Albuquerque et al. de 2011).

RESEARCH STRATEGY

Research Objectives

The general objective of this paper is to investigate the challenges involved in creating and maintaining a mobile payment platform that is focused on financial inclusion in the context of a failed pilot implementation scheme to serve the poor section of the population in Brazil. The specific aims underlining this general objective are as follows: a) to identify and evaluate the expectations and perspectives of all the players involved in the project; b) to evaluate the effectiveness of the operation in terms of its adoption by the users and local traders; c) to identify the main difficulties in establishing and maintaining a specific mobile payment platform. The expectations and perspectives of the players establish their interpretive frame, which is placed within a multilevel framework. The effectiveness of the operation can be understood in a content analysis is grounded in the multilevel framework. The identification of the main challenges is based on the questions raised in the platform design and governance model (Tiwana et al., 2010), and concerned with platform governance and environmental dynamics. Evolutionary dynamics would also be a useful part of the analysis if the pilot project were continued.

This study seeks to obtain a deep understanding of the investigated pilot project and also to find a means of overcoming any possible obstacles in establishing a mobile payment system in Brazil and in other emerging countries, particularly in Latin America.

Data Collection

Banco Palmas, a non-governmental organization (NGO) which was set up to provide financial services to the poor, was founded in January 1998 to help expand financial access in Conjunto Palmeira, which is located 22 kilometers away from the most developed areas in the city of Fortaleza and has more than 40 thousand inhabitants – mostly low-income families that have to struggle to survive to achieve a life of dignity.

The following stages were followed in putting this conceptual framework into practice: a) identifying the social groups involved; b) identifying competing or convergent interpretive frames among diverse social groups; c) identifying mechanisms that could lead to negotiation and change among the groups; and d) identifying both the intended and unintended consequences of technologies-in-practice.

The data collection was carried out during the second semester of 2012 and was based on interviews with the executives of the organizations directly involved in the project: the mobile operator (2 interviewees), the credit card company (1) and the bank (4). The acquirer company declined to give any interview for this study on the grounds that it had no one available to attend us about the particular pilot project being investigated. We also interviewed officials from government departments who were indirectly involved in the project: the Ministry of Social Development (3), the sector responsible for the BFP, and the Central Bank (3).

Two field visits were also conducted in the Conjunto Palmeira neighborhood of Fortaleza, to interview the staff of a local microfinance institution (3), local traders (3) and members of the community (12). The visits were documented with photos, video, and voice recordings.

Data Analysis

We began our analysis by examining our interview data and field notes in the search for emerging themes that had been discussed by our research team. The purpose of this was to assess their initial impact on the different players (relevant social groups) and the nature of the discourse employed by each group to describe the project (the interpretive frame). We then divided all the groups involved in the project into three sections: supply side (MNO, bank, credit card operator, local NGO), demand side (local traders and users) and other people that influence the environment (Central Bank and Ministry of Social Development).

Together with the groups from the supply side, we searched for similarities in their discourse with the narratives described by Maurer (2012) and to understand how they handled their relationships with each other in terms of the project governance. We investigated the comments of the groups from the demand side, to find out if there were any obstacles to the scheme as well as their reasons for accepting the pilot. We analyzed the comments of the other players who had no direct involvement, but who also had a certain interest in the project so that we could understand their reactions to it. This was important, since they have the power to influence the environment surrounding the project.

As a means of confirming our belief in the potential value of the project from the supply side, we checked the platform governance and environmental dynamics by using the questions raised by Tiwana et al. (2010: 679) to analyze relevant factors which can be summarized as “how platform

governance influences the evolutionary dynamics of ecosystems and modules in platform settings” and “how environmental dynamics exogenous to ecosystems influence the evolutionary dynamics of ecosystems and modules in platform settings”. On the demand side, we tried to identify the technology-in-practice. We also checked the expectations of the groups that have the power to influence the environmental dynamics. This approach enabled us to separate the role of each sector (supply, demand and environmental players) in shaping the conception and the reality of the pilot project.

THE MOBILE PAYMENT CASE

Description of the Registration Process for Users and Traders

There were 6 employees that carried out a variety of functions and were present in the lobby of Banco Palmas or in the neighboring areas. After the clients showed an interest in registering and obtaining the chip, there were several further stages. In the first place, the client has to have an account at Caixa Econômica Federal (CEF) and a card brand that is accepted by the Mastercard company. Most of the people had an account at CEF. However, there were difficulties with the card brand, because often the clients had a card with Visa or Brazilian Elo brand. In this case, the client had to request CEF to change the card. In this situation, if the client did not have a Mastercard brand card or did not have a card at all, the client had to wait on average 15 days to receive the new compatible card.

Once the correct card was in place, the Vivo saleswomen started to do the client’s registration, and asked the client to fill out a form including account details, address, and telephone number. In the process of calling the central operator for personal data, the client was asked to confirm the movements of the past account and the numbers on the personal documents. At the end, when all the information had been checked, the client received a free chip from Vivo and was given an explanation about how to use it, for example, how to refill credit.

There were several gaps and difficulties encountered during this process which are listed below:

- The technological affordances had to be understood by potential customers and there was a need for a process of convincing business clients prior to their adoption and effective use of services.

- It took too long to receive the debit card after registering.
- The administration of the debit card could be a problem. Even if the client requested a card from CEF with the Mastercard brand, there were many cases in which they were sent the wrong cards.
- It took a long time to complete the registration (including the filling out of the form, obtaining the client data, and calling the central operator to confirm the data).

Supply Side Analysis

In observing the results of the implemented project, it became clear that there were some serious problems in coordinating the project and a number of failures in the operational process were due to a lack of communication between the partners. After talking with all the partners involved, it became clear that they had different expectations about the project from each other.

CEF states that the project was only intended to provide a mobile channel for the poor who are already clients of the bank; Banco Palmas, in its turn, wanted to attract people to the project who do not have access to banks, and thus increase the social inclusion in the region. Vivo saw the project as an opportunity to gain a market share for its mobile service in a region where they lag behind their competitors; and Mastercard said that this project is just an experience about something (mobile payment) that is only going to be fully realized in 10 to 15 years from now. Finally, the acquirer did not take an active part in the field operations and clearly had a limited interest in the project, which probably explains why they decided not to give any interviews.

What we see here is a repetition of the four narratives described by Maurer (2012:595) that allow mobile payment projects to “frame the discussion” with regard to what is going on, when analyzing projects in this field. The first narrative is called the “Empowerment Story”, and told by the Banco Palmas team, who see mobile payment as a way to empowering the poor through mobile technologies. The second narrative is the “Market Share Story,” told by the mobile operator Vivo, and is about a company that wants to obtain a market share of existing services and create new markets for itself. The third narrative is the “Commoditized Payment Space Story”, told by CEF, and concerns how fee income from small transactions can be generated by the new clients of the bank who use the service regularly, through the launching of a new and more accessible platform. The fourth narrative is the “Tulip Story,” told by Mastercard, which

believes that there is a good deal of “hype” around mobile payment now but that this will probably settle down some time in the future. As these narratives are not compatible with each other, the partners have serious difficulties in building a common platform in which each of them can benefit.

Analysis of Demand Side

The demand side comprises two social groups: local traders , whose products can be bought by local residents using the mobile device, and individual users of the mobile payment system, most of whom are local inhabitants of the neighborhood and beneficiaries of the BFP.

Of the four local traders enrolled in the pilot project, two were supermarkets, one was a construction company of materials, and the other a small clothes shop. In addition, there were several traders in the informal economy that could benefit from participating in the network. However, at the time of our visits to the field, we could not find anyone willing to talk about the pilot project.

One interviewed manager from the local supermarket stated that in over six months, only 2 purchases had been made at his store through the mobile payment system. He said that there had already been staff from the MNO who had stayed at the supermarket to help people make purchases through the mobile system; however, this had not been particularly helpful, since it had been necessary to consult the Banco Palmas staff which meant it took at least 15 minutes for the transaction to go through.

Conjunto Palmeira is located in a dangerous area with a high level of reported crime, much of which is related to drug dealing. All the interviews with users of the system were carried out with female BFP beneficiaries in their own homes and assisted by the presence of two Banco Palmas agents that accompanied the research team. The interviewed women were randomly chosen from the registry of those who possess the chip for the purpose of making mobile purchases. In two days, 12 interviews were conducted and, on the second day, we noticed a repetition of answers, which indicated that a saturation-point had been reached in the interviews.

Users are provided with a clear incentive to register in the system because they can obtain a free chip and have access to the phone service. Since another MNO had a dominant market share in that region, Vivo took a very aggressive position to attract potential users to get the free chip for

making purchases. But what has happened instead, is that these chips are mostly being used for making phone calls and not for what they were originally intended.

Since most users also have another MNO chip, many rely on the use of mobile devices with space for two (or three) chips. Users without a two-chip device ended up by losing the Vivo chip. Some said that they would not use the Vivo chip because they think it is cheaper for them to use chips from the same MNO that their friends and family use. Thus they only use the Vivo chip when other family members have one from the same MNO. This is often the case because Vivo's advertising campaign offered a low price for long- distance calls between two Vivo users.

In this pilot, we investigated some initiatives involving the adoption of mobile payment services, especially those conducted by Vivo and the staff of the Banco Palmas, which were often based on other factors and benefits embedded in mobile technologies. However, during the interaction with the Vivo saleswomen , it was found that potential customers are not easily made aware of the technological affordances that result from using phones to make mobile payments, both in their conception and operation. Furthermore, we have not found that there have been significant efforts to promote the effective use of these services or boost the confidence of the users, either through specific campaigns or outreach and education (Keen 2008). This would certainly be a major challenge for the project.

Among those who had registered to use the mobile payment feature, only 5 had used it once, which suggests a lack of regular use. In this context, it was observed that the process of handling the system was still not successful. The reason some of the interviewed women gave for using the mobile for purchasing purposes was that it would be easier for them to go shopping if they “just carried one thing” instead of the mobile and the wallet or because it was easier to remember just one password instead of two. Others said they would use the system if it included a bonus (free credit for calling) or if it was from the same MNO they already had, which shows a latent expectation in this service interoperability between different mobile telecommunications networks.

Players That Influence The Environmental Dynamics

Tiwana et al. (2010:681) referred to “the power or influence exerted by complementors that directly or indirectly provide services to one or more platforms, but are not part of the module

developer community”, which has the power to influence “evolutionary dynamics in ecosystems.” Service suppliers and regulatory agencies are included in this group of complementary actors. In this research, MDS and Central Bank, are considered the main complementary actors that can influence the pilot project as a service supplier (BFP payer) and regulator, respectively.

The MDS interviewees explained that they had not directly or indirectly encouraged the pilot project conducted by CEF or taken part in any discussion related to it, although they did recognize their responsibility in planning a different project in 2010, which had been barred by the Central Bank. They also confirmed that they would be interested in the pilot project because they saw the natural evolution of the logistics involved in the delivery of government benefits would be through the use of mobile payment platforms. The participants were asked about what issues would be solved by paying through a mobile platform, the logistical costs of delivering the benefits, and the possibility of strengthening their relationship with beneficiaries, not only through the benefit payment scheme itself, but also by sending vaccination warnings, for example. Since they wanted see benefits being delivered without the restrictions of a closed platform, they thought that the pilot project analyzed in this case study did not adhere to the needs and expectations of the MDS.

The interviewees at the Central Bank were mainly interested in knowing about the details of the pilot project because they are closely involved with new regulations governing digital payments, which will be put into effect at the end of 2013. The main concern from the standpoint of the regulator, is to create the right conditions for an interoperable payment ecosystem model that can prove successful. They definitely believe that closed platforms, such as the case of the pilot project, will not survive and so should not be further encouraged.

In short, Central Bank and MDS viewed the pilot project without any positive expectations, since it had a low scale and, as a result of the way it was designed, could not be replicated or obtain the desired scale.

DISCUSSION AND CONCLUSION

Our research question “What are the challenges involved in creating and maintaining a widely diversified network of organizations to develop a mobile payment platform aimed at financial

inclusion?” can be answered by means of the analysis conducted through the lens of the adopted conceptual model. In summary, the main challenges identified are as follows: the control mechanisms in the governance dimension, the influence of complementary actors, the dimension of environmental dynamics and understanding the users’ and local traders’ needs and expectations in the adopted dimension, which is related to technology-in-practice. These challenges are summarized in Table 1 and described below..

Dimensions of analysis	Challenges	Description of the challenge in the case
Platform Design & Governance	Platform Governance	Lack of clear roles for the acquirer (Redecard) and lack of participation in strategic decision-making as perceived by Banco Palmas Operational difficulties
	Platform Design	Most potential customers already have services from other competitors and cannot see the value of the platform
Environmental Dynamics	Regulation pressures	Central bank pushes for interoperability, while MNO is interested in a closed system
Adoption	Diverging interpretive frames	Stakeholders never clearly discussed their expectations (interpretive frames) with each other

Table 1 – Summary of the challenges found in the analyzed case

By conducting the analysis from the perspective of Tiwana et al. (2010) this study has been able to expose serious problems with regard to platform governance. The first problem concerns the control over the platform, regarding the formal and informal mechanisms that are implemented

to encourage desirable behavior on the part of the partners involved. Since the platform is operated by the payment platform of Mastercard and implemented on the Vivo MNO, it is not clear what the role of the acquirer (Redecard) in the process should be. The Redecard did not require any local trader to be part of the network, (all of which was acquired by the Banco Palmas team) and thus, the role of an acquirer in a mobile platform payment system is confusing. It is even more confusing when it is taken into account that the acquirer possibly did not want to encourage competition between the mobile platform and the traditional POS platform that was already being used by some of the traders. This is because the POS network charges more than the mobile network, and hence the acquirer would make less money. The inclusion of informal traders in the region (who do not have access to the POS system) could solve this problem, but the acquirers have no expertise about how to deal with them as clients.

A further factor regarding the platform control, is that very few changes were made during the process, although regular meetings were held with all the participants (MNO, bank, local NGO, credit card and acquirer) , even when it was clear that the pilot fell below expectations. Banco Palmas complained that their demands for services to be implemented in the system such as microinsurance, for example, were never even considered. In fact Banco Palmas generally felt that it was excluded from the decision-making process even though it always took part in the board meetings. The platform was always regarded as inflexible and no attempt was made to cater for the changes that they demanded.

Most of the problems reported by the interviewees stemmed from operational procedures, but never from the technology itself, despite the initial failure of the clients to perceive the technological affordance offered by the use of mobile phones for mobile payments. As described earlier, problems such as the issuing of cards, for example, are mostly due to the fact that they are unsuitable to the internal needs of participant firms in the way they are linked to the mobile payment platform. All the problems characterized as operational concern the control of the platform governance, as Tiwana et al. (2010) point out. To be more effective and increase its potential effectiveness, the project should be redesigned so that it takes account of the governance dimension that combines the diverse business objectives of the partners, since the technical platform does not seem to be difficult to operate.

With regard to the platform design, there is a potential conflict between the value proposition offered in this pilot project and customer expectations, particularly with regard to the lack of technical interoperability and a business model. The suppliers' interest in maintaining a closed platform may be a limiting factor in the adoption and effective use of mobile payments services by users, as most potential customers already have services from other competitors (other MNO leader in the region and / or financial cards with another brand) and would be less willing to pay for them twice.

The environmental dynamics discussed by Tiwana et al. (2010) could also be a problem for the investigated payment platform when the Central Bank issues new regulations for mobile payment systems in the country, at the end of 2013. The Central Bank has pointed out the need to create conditions for platform interoperability, to allow a fully interoperable worldwide ecosystem. The platform investigated in this study did not consider any example of technical or business interoperability and some of the participants, such as the credit card company, see the platform as being the ecosystem itself.

It is also difficult to find an opportunity for implementing new services, such as the example of BFP benefits. MDS has been interested in developing a mobile solution for benefit payments, but imposes serious restrictions which means that its platform is not interoperable. Since the scale of the BFP is large and widespread, and given the fact that the market share dominance of the MNOs is regionalized, the participants should regard interoperability as a key factor for its future survival and evolution so that it can be included in the platform investigated in this study. .

From the perspective of Pozzebon et al. (2009 and 2012), the failures of the project can be attributed to the negotiation procedures between the relevant social groups involved. Since partners never clearly discuss their expectations (interpretive frames) with each other, they are playing a game without pre-established rules. This became clear during the discussion of the business models involved in the project, when it was clear that none of the partners had a clear idea of how the revenue model for the project would be designed, and left this critical factor to be defined in the future when the project finally takes off.

The views of the users and local traders should also have been taken note of in the implementation process. Although they comprise important social groups, they are not monolithic and have various expectations of what should be important considerations in the

design process of the system or even the platform. As they are widely dispersed and have no organized power, it is not easy to find out about their opinions.

On the basis of the classification proposed by Gregor (2006), it can be said that the theoretical value of the case to research is in offering a “theory for analyzing”, i.e. providing an analytical tool for describing the specific dimensions or characteristics of a phenomenon (in this instance, mobile payment ecosystems for financial inclusion). As Gregor states: “this kind of theory is valuable when little is known about some phenomena” (Gregor 2006:624). This is clearly the case for mobile payment ecosystems for financial inclusion since there are few documented cases of failure in the implementation of mobile payment services in the world, especially with regard to financial inclusion. Hence, this work makes an important contribution to the understanding of our research question.

As for its implications in the realm of practice, many observations and some of the conclusions about the problems pointed out, here would not be possible without this analysis of the unsuccessful case. It is to be hoped that all the partners involved as well as key players such as the Central Bank and MDS, will be aware that a lot of work must still be done to build an effective mobile payment ecosystem in Brazil.

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