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Mobile Banking Policies in Mali "What could Mali learn from South Africa and Kenya?"

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Abstract:Whatcould Mali learn from South Africa and Kenya in terms of what positive factors were needed; what potential pitfalls need to be avoided, and how current business culture could be a decisive factor in terms of implementing mobile banking solutions? Data was collected by written and oral interviews with nine individuals, alongside a review of relevant academic literature. Increased accessibility through mobile banking would likely give residents of Mali job opportunities, venture opportunities, and increasingly traceable, transparent and accessible money to the previously unbanked. Access to credit should be regulated, to avoid access to money which low-income users could not return. Without regulation, potential distrust towards both new mobile network operators and mobile banks in general, might rise. Support by Mali´s Government would facilitate the implementation of mobile banking with an increased focus on the private sector, and further commercial incentives between the South and the Northern Territories, creating possibilities for formal payment methods which were previously inexistent.
Keywords: Open Mobile banking policies, financial technology, formal/informal payment, Africa, South Africa, Kenya, Mali

1 Introduction

The three countries, South Africa, Kenya and Mali, have been chosen as focus areas for this paper due to the existence of mobile banking (m-banking) solutions which have seen different popularity and had varying impact on each country´s economic infrastructure. In South Africa, several major banks and platforms are competing in the m-banking solutions market, including the First National Bank (FNB), MTN Banking and Wizzit (42). These all provide m-banking solutions, and have later expanded into neighbouring countries (45). While there are competitors in the market now, strict government regulations and other factors (e.g. ongoing conflicts) have made the implementation of m-banking solutions slightly less effective than in other African countries.

In 2007 Safaricom, the market leading cell phone company in Kenya, launched a mobile transfer system widely considered to be the biggest success of its kind within emerging markets - M-Pesa (27). Combined with the continued increase in mobile phone users and the rising popularity of M-Pesa, the number of users rose by 2652%, from 268,499 to 7,387,980 registered usersbetween 2007 and 2009 (34). M-Pesa, while provided by Safaricom, and supported by UK-based Vodafone, is a solid example of how a low-cost platform combined with modern technology expanded into an obtainable financial service available to a larger audience (34.). While this initiative was backed by a foreign company, there are several other decisive factors in place in Kenya which enabled mobile payment solutions to grow.

Mali is a Sub-Saharan country with a highly decentralized financial system, only 8% of the population has a formal bank account (53). However, in 2013, the French-International phone conglomerate Orange developed a cross border money transfer program in Mali as well as in Senegal and the Ivory Coast (56). The "Orange Money Transfer International" was the first m-banking initiative in Mali, and now both Orange and Malitel (a Malian telephone network), among others, offer m-banking and payment services in the country (53). In Mali´s case, the late introduction of m-banking initiatives, by Orange in 2013, and other firms such as the BNDA´s (National Bank for

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Agricultural Development) platform introduced in March 2017 (11), is important for understanding why informal payments are still frequently used. However, while there are existing opportunities for m-banking, these are limited to a restricted part of the country, as a continuous struggle with infrastructure between parts of the country is a pertinent issue.

What did South Africa and Kenya do in terms of implementing m-banking that Mali could learn from? This main question has been broken down into three sub-questions; what are indications of m-banking contributing positively to economic development in South Africa, Kenya and Mali? What are indications of m-banking solutions being considered financial pitfalls that ought to be avoided? And, to what extent may the country's present business culture be a negative condition? The main hypothesis is general, and aims to give a broad indication as to what might be an answer to the main research question. The three sub-hypotheses answering the three sub-research questions go further in-depth. Existing m-banking solutions in South Africa and Kenya can give quite clear indications as to what Mali could obtain, but only if cultural, political and existing lack of infrastructural factors are taken into consideration. M-banking solutions and other mobile payment methods are having a positive effect on the economic environment, proving that m-banking in turn had a positive economic effect on Mali's overall economic development.M-banking may have a negative effect within the countries, turning the business communities against the idea of m-banking solutions or other formal financial systems. Even though one can contribute with outside help to increase the amount of m-banking solutions or formal financial technology, these may have little or no effect, because the culture of the countries simply indicates what works or not.

2 Key Terms: Economic Development and Financial Technology

Economic theory explains why people make certain choices. When an organization, a fintech start-up for example, establishes itself in a specific context, it is important to consider that individuals respond to incentives (Brickley et al. 2016). When searching for literature on economic development in developing countries, certain names repeatedly appeared – from the last decades; Sen (1999), Stieglitz (2002), Sachs (2005), Easterly (2006), and Collier (2007). Three of these were Nobel-prize winners in economics – Stieglitz, Sen and Sachs. Their conclusions vary on a scale. At the one end was found an understanding that certain basic conditions must be given aid before focusing on economy. At the other end – economic development came first.

Sachsstated that successful economic development is a question about sufficient monetary support. If only enough money is provided, poverty could be eradicated within a rather short spectre of time. In his book The End of Poverty: Economic possibilities for our time (51), Sachs claims that our generation can choose to end poverty by 2025. Collier takes a different stand. His main argument is that even if global poverty is decreasing, the world's poorest people are facing a tragedy that is continuously worsening (12). The growth rate has been negative, and Collier is questioning why current monetary aid seems unable to make a significant difference. He does not think that monetary aid itself can be the solution. He states that the root causes are corruption, political instability and poor resource management, and that the failure to achieve the growth process is the core concern (12). His view does not imply indifference to the social equality aspect of growth, but that any growth is better than no growth.

Senwas awarded the Nobel Prize in Economics in 1998. His research focus goes beyond economics – into philosophy. In his thinking about economics, Sen greatly emphasizes the freedom of the individual. He claims that it is crucial for individual freedom to be present - before economic development can take place. In his book Development as Freedom (57), he argues that a valid development process, also economically, presupposes the realisation of certain "real freedoms", such as education, the health sector and human participation in political processes. Moreover, higher education, research, investments and regulations are important (57). One can argue that these conditions are crucial for economic growth, regardless of the country. Easterly represents a fourth and rather specific position. He is arguably the most outspoken critic of the way developing countries have received assistance to economic development. In his book The White Man's Burden. Why the West's efforts have done so much ill, and so little good (16), he confronts traditional development aid, and how it has not provided economic development (16). He is not optimistic that aid is necessarily real problem solving, and claims that there is little evidence of progress from both foreign governments and aid agencies in terms of learning from experience.

Summing up, there seems to be fundamentally different expressions of world-leading economists, on what should come first in terms of economic growth. Comparing Sen's views with Collier's, there seems to be a prominent disparity between the two. Is it individual freedom and political democratic political participation, or human capital (higher education and research), investments and market conditions that dictate the terms for economic growth?

Contrasting these four economists´ views with subjective experiences in Mali, Collier seems the better match. Economic development needs to come first. Without a sustainable economy people cannot be secured neither food and shelter, nor education, health and democracy. Economic development in the communicative, global and digital world has become increasingly dependent on financial technology. At its most basic level, this is represented by access to mobile phones and subsequently m-banking.

Financial technology (Fintech) designates the building of systems which focus on the digital process, model, and value to facilitate the digital movement of financial products such as bonds, stocks, contracts and money (19). Like commercial

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solutions, financial systems include trading technology which aims at facilitating the buying and selling of products at optimal times in diverse markets. Fintech shares characteristics with military technology, in terms of monitoring, tracking and predicting events. Furthermore, much of fintech activity is encoded and decrypted to prevent leakage of information and counter espionage (19). As of now, the infrastructure needed for fintech to function optimally is present in certain parts of the world, but certainly not in all parts of the focus countries in this paper.

For fintech to work, three general changes need to be instigated: increase in services related to electronic media; further progression in internal management information systems within financial institutions; and the continuous R&D of financial engineering to create increasingly user-friendly solutions (21). With the rise of fintech, e.g. m-banking, and the individual opportunities it presents, commercial banks are threatened by non-bank competitors, stockbrokers and individual start-up firms. Hence, established banks face the risk of being replaced by mobile solutions (21). This friction caused by the outreach mobile banks must have to non-conventional customers will likely be an issue traditional banks need to handle to stay relevant to the unbanked.

Innovation and entrepreneurship are in constant focus within the development of the African financial market. Considering the increased impact of innovation combined with fintech, there are three shifts to examine: focus on innovation incentivized within the national economy; increased R&D within innovative solutions within financial technology; and clear examples of funding inputs with clear rewarding demonstrated outcomes (14). Regarding entrepreneurship in Africa, an effective and dynamic organizational structure is crucial to remain successful. With lacking infrastructure, the need to effectively mobilize, organize, utilize, protect and develop resources is key. Combining these needs with consistently maintaining beneficial networks and strategic corporate governance would reduce the difficulties met by African entrepreneurs (33). While business in Africa consistently moves from informal to formal, the African entrepreneur faces both new challenges, but also new possibilities (33). This movement from informal to formal, is unprecedented in large parts of the focus countries, andrelevant research and implementation of m-banking will likely be crucial for its effectiveness.Focus on m-banking within fintech, is founded on the importance of the individual user for mobile platforms to function, for data to be collected, and for its effectiveness to be optimal.

Economic development on globalization's inevitable technological premises is crucial for any country's survival. When developed countries are assisting developing countries, the focus ought to be on investments, infrastructure and regulations. There ought to be awareness on the market both domestically, regionally and internationally. Swift communication technology development is likely the most typical feature of globalization. The spread of mobile phones, and subsequently smartphones is a notable example of this. When this type of technology is linked to economy – this logically introduces financial technology. At the individual level, m-banking solutions come into focus, and in its simple form it may be an important innovation to create economic development in poor countries.

3Research on M-banking in Africa

Throughout the last decade, the diffusion of mobile phones has rapidly increased across the developing world, including Africa (28). However, the number of mobile subscribers is consequently lower in Africa than in any other part of the world, averaging 21 subscribers per 100 Africans, compared to the world average of 41 per 100 (45). Regardless of these numbers, m-banking and the use of communication technology have provided financial services to a growing African population often made remote due to lacking infrastructure (60). The term m-banking is used to cover a wide range of financial services: M-Commerce - payments made by using the providers' given mobile data; M-Payments - a wallet function which allows payments directly from the mobile device; and M-Banking - access to a bank account through which banking transactions can be made (60). While m-banking may be an effective tool in providing practical financial services and transfer solutions to a larger audience, there are factors which made these effective in South Africa and Kenya which need to be introduced in Mali for these to function.

Mobile networks are expanding continuously across Africa. They are facilitating the usage of mobile services in areas where it is difficult to implement infrastructural changes, and lay physical landline connection (45). With the implementation of m-banking and usage of mobile devices as a platform for banking transactions, there is potential for vast improvement and access to financial services to the economically challenged and people in remote areas (45). For m-banking to function there are four primary entities that need to be involved: A Bank, a Network Operator, a M-banking Tech Platform and the Subscriber/Consumer (36). Throughout the development of m-banking so far, the Tech Platform entity has been the driving force behind extending traditional banking functions to mobile phones. With the continued penetration of mobile phones, however, stakeholders in this scenario, banks and network operators, have increasingly invested in m-banking solutions (36). With the success seen in certain countries in Africa, the factors which have functioned in certain countries, may not necessarily be the same which function in a different part of Africa, and highlighting these will be key to implementing these services successfully.

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Mobile banks combine their electronic banking systems with an existing physical network of agents and local banking affiliates, giving the possibility to subscribers to convert physical money into airtime, send money to contacts or to pull out e-money into physical currency (15). While the banks continue to use traditional marketing branches to approach its customer base, these channels (ATM´s/Internet/Sales Stands) have evolved and extended to reach a larger customer audience (36). However, this change has resulted in a decrease in physical entities, and a reduction in the cost of infrastructure and implementation which would be normal in a developed market. Certain rural areas are more easily obtainable through solutions that do not require physical platforms (36). As of 2015, Sub-Saharan Africa accounts for most of the world's m-banking solutions (52%), but a trend shows that more than half of the solutions launched were outside of Africa (22). Trends do indicate, however, that these solutions are expected to grow by 50% in both the Middle East and North Africa (22). There is persistent evidence that Africa is a pioneer within m-banking solutions, spearheaded by initiatives such as M-Pesa in Kenya, setting the standard for 9 out of 10 of the world´s leading m-banking companies, which are all in Africa (30). On a global scale, East Africa has the deepest penetration of m-banking solutions, and West Africa is continuously growing (30). With initiatives expanding to developed countries as well, such as Norway, with the mobile payment solution Vipps(Vipps 2017), it becomes increasingly important to highlight the factors which need to be present in specific countries for the implementation of such solutions.

M-banking is a practical solution to the Africans with bank accounts and physical access. This puts even greater emphasis on the possibilities m-banking presents to the unbanked (15). M-banking has traditionally targeted individuals and families, making small scale transactions, and has not focused on SME´s or traditional businesses (15). With improvements being made to mobile network infrastructure, job and venture opportunities would follow, which could increase the focus on SME´s and further economic development.

In Sub-Saharan Africa numerous banks have introduced or are currently introducing m-banking solutions and products (49). Here m-banking is increasing in popularity, indicating that mobile phone usage has contributed to economic growth in Africa (4). A partial reason for this growth has come from the financial inclusion which mobile phones provide to a wider audience. This reason is strengthened as mobile technology progresses, especially in the countries where m-banking solutions are being prioritized (4). Furthermore, the diffusion of mobile phones reduces the costs of running physical banks, incentivizing "branchless banking services". While mobile technology may be a focus in certain countries, others still lack the private sector for outside initiatives to invest in the local mobile technology, and instead introduce a foreign technology, which may not be optimal for the nation in question.

For future adoption of m-banking solutions, an important initial step is promoting the importance and possibilities within e-commerce (46). While a significant part of the African population has cell phones (28), the penetration of m-banking solutions being used is relatively low (46). The faster m-banking solutions reaches a designated consumer market, the quicker the bank can see a return on investment (46). Research indicates that the African countries that provide financial services show a correlation between financial inclusion and mobile phone diffusion resulting in durable financial growth (4). For further development of m-banking solutions in Africa, the importance of continued mobile phone diffusion is emphasized, and both domestic and foreign investments is critical to the success of m-banking adoption in rural areas. An issue that has arisen in certain African countries has been the increased taxation on mobile communications services. The risk of this occurrence needs to be considered before investing further in m-banking solutions in certain countries or environments. However, experiences from Kenya and South Africa have shown that m-banking and the increased adoption of mobile financial services have reduced the infrastructure gap (4). While this may have been the case in Kenya and South Africa, the general and financial illiteracy present in Mali could be an issue in terms of hastily reducing infrastructural gaps. Illiterate low-income users may not take to mobile payment solutions easily.

Digital convergence is a positive factor. However, it also raises regulatory challenges. Regulations are necessary, but they can also disturb digital markets. They may harm competition and cause slower innovation. In worst case, they may reduce consumers' benefits from technological innovations (22).Recognizing the role of informal institutions will be important both to increase the access of the broader population to m-banking solutions, and to reduce the high interest rates connected to local monopolized power (47). Government regulation may go two ways. Regulations can lead to increased transparency, and a potential decrease in corruption. It might also lead to easy access to credit for low-income users, which could both damage the m-banking industry and its then indebted local population.

M-banking in Africa is expanding, mostly successfully, while continuously adapting new financial technology and adding it to existing infrastructure. However, digitalization in general requires regulations, that might ultimately reduce customer´s benefits from new financial technology and m-banking solutions.

Findings from the literature review give a temporary answer which in next section will be supplemented with empirical findings. In addition to the positive lessons learnt,there are also pitfalls that Mali ought to avoid. M-banking is a creative solution in areas lacking certain infrastructure, like land lines. However, for m-banking to function four factors need to be in place: a bank, a network operator, a m-banking platform and subscribers/consumers. M-banking reduces the cost of running physical banks and promotes "branchless banking service". In South Africa and Kenya there is correlation between m-banking and financial inclusion, resulting in stronger financial growth. The Kenyan m-banking success compared to South

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Africa appears as a puzzling paradox: The success was primarily based on a lack of infrastructure. This assumingly negative factor made individual mobile payments grow much faster than in countries with less corruption and a trusted bank culture, like South Africa. There appears to be certain key preconditions behind Kenya's and South Africa's success: A stable economy, developed educational system, sufficient technological infrastructure – and culture and language. The English language may have been an advantage for South Africa and Kenya, giving them easier access to international research and policies. The political, military and cultural situation in Mali makes a more complicated context for implementing m-banking.

Confronting the three sub-hypotheses with the literature review, there seems to be an overall positive contribution to the economic environments, in each of the three countries. The first sub-hypothesis is approved. M-banking having a negative effect does not seem to be the case. Hence, the second sub-hypothesis is disproved. Considering the business culture of the countries being an issue, especially considering the gap of effect between Kenya and South Africa, this hypothesis is neither confirmed nor disproved.

4 Empirical Findings

Empirical information was collected by interviewing nine academics and professionals familiar with m-banking in the three countries. Included was a civil servant in the Norwegian Ministry of Foreign Affairs, because Norway is now establishing an embassy in Bamako aiming at supporting development in Mali.Empirical evidence from each of the countries is presented as responses to the three research questions, RQ1, RQ2 and RQ3 (see Table 1 below) The total number of interviewees (9) is divided into two groups; academics and professionals – reflecting their position in either higher education/research or administration/business. The assumption behind this dividing was that perhaps academics and professionals would assess the issue from different basic understandings. Maybe the academics would reflect more principal economic reflections, while the professionals would focus more on practical problems. For Kenya and South Africa, academic respondents were not available. The civil servant in the Norwegian Ministry of Foreign Affairs is listed as Professional.

While interviewing the civil servant from the Norwegian Ministry of Foreign Affairs, who had prepared the establishing of an embassy in Bamako, the questions were generally concerned about what the embassy´s focus areas would be.

For RQ1, the academics all mentioned that facilitated access to financial services has been a positive contribution made possible by m-banking. It was only Malian Academic #1 who mentioned the possibility for saving money in a mobile bank instead of physical cash in rural areas. For RQ2, all the Academics, except for Malian Academic #3, mention the high transaction fees as a potential pitfall, while both Malian Academic #1 and #2 mention that crimes caused by financial illiteracy is a pitfall which makes it difficult to include low income and illiterate parts of the Malian population. In terms of RQ3, Malian Academic #3 claims that the current usage of cash in certain industries (e.g. taxis), is unlikely to change as a majority of customers and providers do not trust m-payment as much as cash in hand yet. Mali Academic #2 mentions iliteracy as a main factor for the environment not being ready for m-banking, while Mali Academic #1 claims there are no major factors affecting the business environment in terms of implementing m-banking in Mali.

Following the Academics´ answers to the research questions, attention is turned to the Professionals' answers. For RQ1, Kenya Professional #1 and the Mali Professional both commented that m-banking has created new job opportunities both in the form of a new industry, but also through the new venture opportunities it creates. Both Kenya Professional #2 and the Mali Professional inform that the increased accessibility has been a positive contribution to previously unreachable users. Kenya Professional #2 is the only one that mentions that m-banking reduces the need for physical cash and therefore results in less robberies, while both Kenya Professional #2 and #3 agree that m-banking, and its element of transparency and traceability, has led to a decrease in lower-level corruption. Kenya Professional #3 and Mali Professional agree on the fact that with less time and effort spent moving money, the opportunities for making money and effectively using it has risen.

However, while many of the interviewees have similar views on positive contributions, certain points are mentioned separately. Kenya Professional #1, for instance, highlights the revenue m-banking gives back to the Kenyan Government, which is then re-invested in venture creation opportunities, strengthening the country's economic infrastructure. The South African Professional mentioned the positive outcome of increased legal regulations and Kenya Professional #1 also mentions the opportunities for saving through m-banking as an unprecedented opportunity for users lacking the infrastructure. Finally, Kenya Professional #3 is the only interviewee who mentions that Kenya sees a wide array of possibilities for usage of mobile payments due to the high literacy in Kenya, resulting in it being actively used throughout the country.

Regarding potential pitfalls, the interviewees had varying answers to RQ2. The South African Professional comments that introducing m-banking solutions in a country with an established bank was not necessarily done correctly, and that it resulted in double investment due to lack of research and comparisons with neighbouring countries. Kenya Professional #2 and #3 both mention the issue with m-banking and certain network operators facilitating the access to credit to low-income users. Kenya Professional #2 further stresses the issue that networks have become unregulated banks with the possibility to give out credit almost without limit, which has already created issues with in-debt users because of mobile payment solutions.

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Table1: Empirical Results

Research Questions/ Respondent Groups	RQ1 What are indications of mobile banking contributing positively to economic development in South Africa, Kenya and Mali?	RQ2 What are indications of mobile banking solutions being considered financial pitfalls, that ought to be avoided?	RQ3 To which extent may the country's present business culture be a negative condition?
Academics			
Academic #1 Mali	Expansion of financial choices where access to formal finance is limited (facilitated transactions) Mobile money as a method of saving Potential for increased usage with further collaboration with banks	Expensive transfer prices can limit the access to mobile banking in an already poor population High illiteracy discriminates low income users and many are not comfortable using mobile applications to transfer money	No negative impact from current business culture
Academic #2 Mali	Facilitated transactions and utilizations of cash Access to financial services without access to formal banks	Fraud by criminals using technology against less educated users Money sent to the wrong recipient takes a long time to get back Expensive transaction fees	Illiteracy of customers makes them dependent on educated people for transactions
Academic #3, Mali	Flexibility, security and efficiency to those who don't usually have access	Security threats in the form of" phishing"	Illiteracy of traders and the necessity of cash is still the norm, even if mobile phones are abundant
Professionals	**RQ1**	**RQ2**	**RQ3**
Academic South Africa	Increased accessibility to financial services for those relying on informal payment methods Increased Legal regulations, and a requirement of FICA (Financial Intelligence Centre Act) verification	An already stable banking environment and a lack of evaluation of m-payment in neighbouring regions resulted in double investment Cost of access (data) could prove costly to low income users	Difficult to move from cash to m-payment in certain industries (e.g. taxi business)
Professional #1, Kenya	Increased employment opportunities by promoting new ventures, as well as providing job opportunities Earning revenue back to the government through a certain percentage, which is later used for economic infrastructural improvement Introduced saving possibilities to the previously unbanked	Rise of fraud due to mobile banking Mobile Banking outlets are continuously targets for robbery due to lack of proper security Robbery of individuals rise as a result of savings in mobile wallets and is a serious security threat	Strict legal regulations which restrict access to business ventures Fear of business ventures due to individual fear of economic loss Sudden success of a firm leads to negative popularity
Professional #2, Kenya	Facilitated access to mobile banking services Less cash leads to less robbery or loss of physical money Transactions can be controlled and followed, which has resulted in a decrease of lower-level corruption	Networks are operating as unregulated banks and give credit straight from mobile bank accounts, which enable low-income users to borrow sums they potentially cannot pay back	Solid business culture aided by developed mobile networks, a focus on commercialism, and a strong private sector.
Professional #3, Kenya	More time earning money instead of transporting or moving money Wide possibility of payment by mobile money due to high literacy level on mobile payment methods Less corruption due to higher transparency	Government and regulatory authorities are giving easy access to credit, indebting illiterate people Ease of access to credit is already an issue in terms of effectively introducing new and innovative mobile banking solutions	The digital environment is more traceable than the informal, which leads to less corruption
Professional, Mali	New mobile banking opportunities provide job for previously unemployed men and women Easy access to financial services to pay for everyday amenities Facilitated movement of money, with the possibility to deposit/withdraw from mobile phones instead of physical banks	Expensive transaction fees, with various banks applying different rates depending on services, and are often more expensive than traditional banking rates The competition created by mobile banks, creates friction with traditional banks, and newly established mobile banks may struggle to become established against bigger players	Illiteracy is a cultural and economic problem among users

Both Kenya Professional #3 and the Mali Professional mention that m-banking solutions have created friction with traditional banks and that this has become a barrier to entry both for new innovative solutions and to other players in the market. While only the Mali Professional mentions that the expensive transaction fees are potential pitfalls for further implementation of m-banking solutions in Mali, Kenya Professional #1 mentions that an increase in fraud, in partner outlet robberies and robberies through individual m-wallets is a definitive pitfall and a rising issue in Kenya.

Finally, with RQ3, the interviewees gave their opinion on the current business environment in their country, and how it affected m-banking opportunities. All their answers are seemingly different, with either a negative or a positive view of the current business culture. Kenya Professional #1 mentions the country´s strict legal regulations as being a restrictive factor, resulting in fear of economic loss through personal ventures. Furthermore, Kenya Professional #1 states that the sudden success of firms and the ease of access by individuals leads to oversaturation and sometimes a hasty end to the newly established firm. Kenya Professional #2 however, comments on the solid business culture, the focus on commercialism and the solid investment in the private sector as major positive contributors to the business environment continuously strengthening m-banking opportunities. Kenya Professional #3 comments along the same lines, mentioning that the increasingly digital environment and the "digital smoke" left behind transactions leads to less corruption, and therefore a continued focus on improving m-banking solutions. The Mali Professional approaches this with a slightly more cautious

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response by mentioning that general illiteracy, combined with economic and cultural problems are such large factors - that effectively implementing m-banking could prove difficult. He further comments that the illiterate population still depends on educated personnel to use m-banking solutions and even taking care of their bank passwords.
The representative for the soon to be established Norwegian embassy in Bamako, having explained that he had no definite answers for the research questions, informed about how the embassy´s focus areas would not include the financial sector in the next few years, but that it would focus on migration and the issues it encompasses.
The data also indicate a pattern showing a difference between Academics and Professionals. While both parties agree on terms such as the positive outcomes of accessibility and the rise of petty crime because of mobile wallets, the Professionals have both an optimistic and entrepreneurial view which the Academics do not mention. The aspect of venture and job opportunities presented by the rise of mobile payment methods are mentioned by several of the Professionals as a key factor. Furthermore, the ease-of-access to credit, is not mentioned by the Academics, but is highlighted by the Professionals as a potential pitfall.
M-banking solutions have had a positive effect in each individual economic environment. The several factors are ranging from increased accessibility, to an increased amount of saving among the previously unbanked, to the continued focus on legal regulations. They all culminate in a transparent, traceable formal payment method, which creates both individual job opportunities, but also future ventures which could mean much more for each nation's economy. The first sub-hypothesis has been proven to be correct.
Certain factors were identified which indicate negative issues with m-banking. A recurring subject is fraud, and a rise of technological crime because of either "phishing" or general illiteracy being taken advantage of by more savvy users. Apart from the individual level, the ease of access to credit and quick money has already put low-income parts of the population into debt. Furthermore, while m-banking works well for certain industries, the need for cash and physical money being used in a large amount of everyday industries (e.g. markets and taxies) there are complications which turn certain populations away from m-banking solutions. While the second hypothesis may seem contradictory to the first hypothesis, what it does is to confirm that there are certainly negative aspects to m-banking, but these factors are heavily outweighed by the positive.
Considering the different business cultures in these three countries, especially Mali, outside implementation may be a difficult instigator. However, it is not likely to be useless. Vodafone was a catalyst for M-Pesa and Safaricom´s success in Kenya, and the business culture in South Africa was greatly influenced by Western standards before m-banking was even a factor. In Mali however, there are indications that cultural and economic factors are so strong that an outsider may not be best suited to implement m-banking solutions. Therefore, the third sub-hypothesis was slightly wrong, as it does not comply with two out of the three countries.

5 Discussion

The interviews provided pieces of information previously unfound in the literature review. The first piece of newly found knowledge was not only how the important level of illiteracy seemed to be such a negative factor in terms of m-banking in Mali, but how it also led to fraud and exploitation which made people reluctant to use it. What was even more interesting here, was the fact that a certain interviewee claimed that the current business culture in Mali did not impact the implementation of m-banking negatively, while all other Malian interviewees commented on illiteracy and continued lack of access as a major inhibitor. This discrepancy triggers a need for follow-up research.
The second piece of empirically obtained knowledge was the apparent danger of access to credit given by mobile network providers functioning as unregulated banks, pushing low-income users into debt. Throughout the literature this has not been mentioned. This observation is particularly relevant, because it may be a potential pitfall in Mali, if m-banking solutions were to become as integrated into society as it has become in Kenya. These two empirical findings ought to be considered in terms of future implementation of financial services and m-banking solutions in Mali. The current situation is involving both an ongoing UN military operation, an active terrorist threat in both in the North, and increasingly in the "safe" southern part of the country.In this demanding situation improving its economic infrastructure may not seem to necessarily be a crucial priority. However, it may be argued that economic development is a basic condition for achieving all other needs in any society. Some leading economists claim that people's basic needs must be fulfilled first – such as food, water and shelter. However, from personal, practical experiences in Mali, from information gained through the literature review and empirical responses to interview questions, it seems fair to side with (12), and accepting his analysis that the root causes for lack of economic development are corruption, political instability and poor resource management. The failure to achieve the growth process is the core concern for economic development in poor countries (12). The second overall concept for this paper was Financial Technology. Coinciding with Collier's thinking, it seems fair to agree with the fact that the enabling of safe and effective transactions of money is important to strengthen the infrastructure in Mali. A major step for the Malian Government is to be involved in the process at an early stage. This could perhaps be a crucial act for Mali later, as a governmental legal change may be the needed catalyst, which apparently functioned in South Africa.

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In terms of potential pitfalls, Mali could risk losing the momentum of implementing m-banking solutions. The risks linked to being tricked by literate and more technology savvy individuals would likely drive illiterate unbanked users away from mobile platforms. It might slow down the process of reaching far away locations in the country. With the transparency and traceability of m-banking solutions, they could potentially stop continuous funding of terrorist organizations and general smuggling, while ultimately potentially reducing corruption in the country. However, this is an inconvenient situation, informal trade is a crucial part of the business environment of the Northern Territories, and it is difficult to see how and why they would change to mobile payment solutions in terms of funding illegal actions.

Regarding Mali´s current business culture, the recurring theme affecting it appears to be illiteracy, both generally and financially. Alongside this business environment issue, other major factors such as its economy and the cultural divide between North and South are major challenges. Mali can be defined as not being a single collected country, as certain organizations within the Northern part wish to create its own state, Azawad.

There is an issue of the effectiveness of outside initiatives in aiding with further establishing financial technology in a country like Mali. Such an initiative might be by Norway. The country is establishing an embassy in Bamako in 2017. When interviewing a representative of the Norwegian Ministry of Foreign Affairs, Norway's focus in Mali was questioned, and whether assisting economic infrastructure was a priority. Norway would not focus on economy and fintech within at least the first several years, but mainly stress the migration and human rights issues. However, the representative also informed that the Danish Embassy was focusing on entrepreneurial hubs, aimed at aiding start-ups and ventures. Norway and Denmark seem to stress different factors for a constructive development in Mali. Referring to two leading economists - Sen (1998) and Easterly (2006) – one may wonder why Norway seems to side primarily with Sen in its aid policies, stressing migration issues and human rights. This is contrary to Denmark putting priority on start-ups and ventures - more on line with Easterly. Further research might explain the two Scandinavian countries' differences in aid policies on Mali.

6 Conclusion

Mali can learn important lessons from South Africa and Kenya. However, their experiences must be screened to match constructively with the Malian situation. Increased accessibility through m-banking would give Mali increased freedom of movement for transactions, job opportunities, venture opportunities, and increasingly traceable, transparent and accessible money to the previously un-banked low-income users. Following the positives, come the pitfalls Mali should avoid. When m-banking gains a strong foothold in Mali, access to credit must be regulated, to avoid lending money which low-income users could not return. Moreover, too hastily introducing a new m-banking initiative could harm the industry more than it would gain. In terms of the business environment, there ought to be an increased focus on the private sector, and further commercial incentives between the South and the Northern Territories.With the ongoing issues in Mali, such as terrorism, smuggling, migration, poverty and famine, an improvement which would facilitate the everyday financial transmissions of a challenged nation would be a welcome option. This study has to a fair degree confirmed that economic development is instrumental for stability and peace in Mali. With the traceability and "digital smoke" created by m-banking solutions, corruption and smuggled money would potentially decrease, resulting in improvements in the general Malian society. However, data does indicate that m-banking itself may not necessarily contribute to higher bank account rates in low-income countries. There is a definite necessity for further research in terms of highlighting what would incentivize unbanked populations away from what have been their norm for centuries, and over to transferring, saving and living with mobile money.

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Appendix

Abbreviations & Acronyms

APBF Association Professionnelle des BanquesetétablissementFinancieres (Professional Association of Banks and Financial Insitutions)
ATM Automatic Teller Machine
AQIM Al-Qaeda in the Islamic Maghreb
BCEAO BanqueCentrale des États de l´Afrique de l´Ouest (Central Bank of West African States)
BNDA BanqueNationale de DéveloppementAgricole (National Bank for Agricultural Development)
CEO Chief Executive Officer
EBS Essex Business School, University of Essex
E-Money Electronic Money
Fintech Financial Technology
FCFA Franc CFA (West African CFA franc)
FNB First National Bank
GDP Gross Domestic Product
GSMA Global System Mobile Association
ICT Information & Communication Technology
KYC Know Your Customer
MBA Master of Business Administration
MINUSMA The United Nations Multidimensional Integrated Stabilization Misision in Mali
MNO Mobile Network Operator
MTN Mobile Telephone Networks – MTN Group South Africa

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