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Barriers to Entrepreneurship and Innovation: An Institutional Analysis of Mobile Banking in Jamaica and Kenya

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ABSTRACT

Growth in mobile phone penetration is one of the most significant technological developments in human history, spurring a number of innovations and entrepreneurial opportunities. Among these is the conduct of monetary transactions via the mobile phone, which promises to revolutionise access to financial services and opportunities for business and entrepreneurship in developing countries. However, whereas mobile banking via M-Pesa has revolutionised financial services and access in Kenya, take up has been slow in Caribbean islands such as Jamaica; this even while demonstrating a strong case for adoption. Through case studies of Jamaica and Kenya, the article asks why countries have not been able to adopt this innovation. It suggests that institutional theory through its focus on context and institutional endowment offer insights into why some countries are able to adopt innovations and entrepreneurship and others, not. The article's strength lies in its focus on the role of endowment on the ability to adopt innovations and build related entrepreneurial ventures. It also connects discussions on the impact of government regulation in determining the pace at which innovations and entrepreneurial ideas flourish and how to regulate in sectors affected by rapidly evolving technological innovations.

Key Words: Entrepreneurship, Enterprise, Innovation, Institutions, Endowment

The growth in access to mobile telephony has been one of the most profound technological developments in history with penetration rates as high as 97% of global population, or over 7 billion in 2015 (ITU 2015). Positive implications have been noted for developing countries. Included here is potential for increased productivity and development (Deloitte 2012; Waverman et al. 2005). With high penetration rates, attention is now being placed on the potential for related innovations and entrepreneurial developments around the

mobile phone. The implications for reducing the digital divide among and within countries, and for increasing access, have been noted (Alzouma 2013; Geser 2004). Mobile banking—that is, the use of mobile phones or a smart device to conduct financial transactions is one such innovation. Indeed, mobile money or banking (i.e. the transfer of money via a mobile phone) has been held up as being important not only for financial inclusion but for the development of a digital ecosystem (Muthiora 2015, 8).[1]

For the developing world, the impact of the use of the mobile phone in financial transactions can be seen most vividly in Kenya. That country has been successfully inserted into global finance in ways not yet achieved by many developing nations. This has been done through one of the most innovative technological enterprises to have emerged in the developing world, the mobile money transfer company, M-Pesa.[2] M-Pesa has generated significant attention in academic and policy circles. Research and commentaries have focused on M-Pesa's economic and social impact, especially on poor, rural communities and micro-businesses, as well as improved service delivery and remittancing, among others (e.g. Morawczynski and Gianluca 2008; Aaker and McLoughlin 2010; Mbogo 2010; Mas and Radcliffe 2011; Jack and Suri 2011; Mbiti and Weil 2011; King 2012; Omwansa and Sullivan 2012; the Economist 2013; Barasa and Lugo 2015). M-Pesa's growth has been tremendous. Within a year of start-up (i.e. by 2007), M-Pesa had secured 175,000 customers and 577 agents, moving to 2.5 million in May 2008, and 4 million and 4,230 agents by September of that year. This innovation has therefore added significantly to the Kenyan economy with estimates that 87% of its $55 Billion GDP actually passed through M-Pesa in 2014 (Central Intelligence Agency 2015; Ipsita 2015; Muthiora 2015; Ochieng 2015). Kenya was able to adopt innovations around the mobile phone at a relatively quick pace, indeed as suggested by Jack and Suri—adoption has been the fastest and most wide-spread of any developing country (2011). This is interesting, particularly where other developing countries

1 As used here this relates to the actors, organisations, rules, infrastructure, processes, etc. around the mobile phone and the connections across these that make them a functioning system.

2 Swahili for cash.

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have not been able to adopt this innovation, even where there appears to be a strong and likely case for adoption.

One such country is Jamaica where, in spite of high mobile phone penetration and an unbanked population of 35%, that country has been much slower off the mark in adopting mobile banking. Indeed, a 2011 study suggested that over 80% of adults in Jamaica had limited access to low-cost, efficient and easily accessible payments channel (Elliot 2011). Furthermore, it has been suggested that mobile financial services can help to increase the use of banking services (and financial inclusion) among the un- or under-banked (Burhouse, et al. 2014) and that a move to electronic payments can lead to an increase in a country's GDP (Zandi, Singh and Irving 2013). These observations are significant for a country with 1% real GDP growth annually over the last 30 years (World Bank 2015). As such, Jamaica appears well-positioned in terms of the value proposition for the establishment of mobile banking as a route to financial inclusion, the more efficient delivery of financial transactions, and growth inducing entrepreneurial innovations. Yet at the end of 2015, no company was operating in this area after years of discussion on the prospects for mobile banking.

The question preoccupying this article therefore is why has Kenya been able to adopt mobile banking so rapidly, while Jamaica has been slow in doing so? The article suggests that institutional theory offers an explanation for why some countries are able to adopt innovations, as well as why some innovations will thrive in some countries and not in others. More specifically, it is suggested that a country's institutional endowment or the specific mix and capacity of its institutions (Levy and Spiller 1996) will affect the extent to which innovations and entrepreneurship can emerge and thrive successfully. This is so given the observation that "innovation does not take place in a vacuum" (see e.g. Edmonson 2009, 137; also Freeman 1987; Lundvall 1992; Nelson 1993; Edquist 1997). That is, institutions help to define what is possible within a system, and what activities can or cannot take place and how. Institutional theory draws attention to the performance of systems across settings and the interaction of actors and interests within this system. Such systems support innovation, helping to determine whether it will be incremental or radical and with what effect (Sörvik 2010). Authors such as Hollingsworth (2000) have in fact noted the impact of institutions on innovation and entrepreneurial

activities (also see, Licht and Siegel 2006; Busenitz et al. 2000). It has also been observed that little understanding exists of the impact of institutions on entrepreneurial and innovative activities (Eesley 2010) and suggesting the need for such studies.

The implications for both praxis and theory are far-ranging, hitting at the heart of some of the longstanding questions in development and growth.[3] We do not intend to treat with these longstanding issues in a fulsome way here. Briefly, it is noted that much of this literature has focused on explaining the movement from developing to developed, comparing developed nations or firm level adoption of innovation. A key distinction in this article is the focus on differentiating factors between developing countries and at the sectoral (as opposed to national or firm) level. That is, what contributes to the successful adoption of the same innovation in one country versus another? Furthermore, while many reviews exist of the M-Pesa model, not many have sought to understand these developments in a comparative and institutional context. The findings can help increase the likelihood of success for countries that have or are seeking to adopt similar innovations. Finally, the research can contribute to understanding the strategies or approaches for designing a regulatory and legislative environment that mitigates risks, even while fostering innovation.

CONCEPTUAL FRAMEWORK

Innovation and entrepreneurship are considered essential pillars of growth and country's ability to catch up or narrow the gap between themselves and others (Fagerberg and Verspagen 2006).[4] Drawing from the innovation and growth literature, this article views economic growth as a result of three factors: firstly, the ability to exploit knowledge developed in another setting; secondly, innovation or the creation of new knowledge in the country; and "complementary factors affecting the ability to exploit the potential entailed by knowledge (independently of where it is created)"

3 These include, why are some countries able to adopt innovations more than others? What are the inhibitors or success factors for economic growth and development; what is the relationship between innovation (including technological innovation) and growth (Abramovitz 1986; Romer 1990; Lundvall 1992; Nelson 1992; Nelson and Rosenberg 1993; Verspagen 1995; Martin and Ottaviano 2001; Grossman and Helpman 1994).

4 The OECD defines innovation as "the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations" (2005, 46).

(Fagerberg 2007, 5). However, as Fagerberg and Godinho observed, there is much diversity in strategies and consequences. To this end, successful growth is seen as accruing to countries that tend to focus on the technologically most advanced industries of the day (Fagerberg and Godinho 2006), with technology and innovation more recently featuring as prominently as manufacturing or capital accumulation. Technology therefore has the ability to spur creative destruction (Schumpeter 1934), which sees established norms, procedures, industry structure and incumbents being challenged. The proliferation of mobile phones and the emergence of related services and innovations may be considered amongst the most technologically advanced. The task for developing countries then, is to find ways of exploiting mobile phones to develop new services and opportunities for growth and development.

While innovation and entrepreneurship are important for growth, the reality is that institutions do have a constraining or facilitative impact (Licht and Siegel 2006; Busenitz, Gomez, and Spencer 2000). That is, institutions help to determine strategies, interactions, the activities that are possible and the consequences of such strategies in different settings. Given the observation that innovation does not take place in a vacuum (Edmonson 2009), this also calls to mind the role of regulators, firms, as well as research institutions, in allowing ideas to emerge and take effect. A focus on the role of institutions is also important in so far as it draws attention to the different ways in which societies are constructed, including the different levels of autonomy in that society (Sorvik 2010). It has, however, been observed that little understanding exists of the impact of institutions on entrepreneurial and innovative activities (Eesley 2010).

Institutions and Endowment

The term 'institution' is a contested concept covering a range of definitions and meanings.[5] Nonetheless, attempts have been made to impose some order on the concept with some agreement that institutions can be described as, "the rules of the game . . . or, more formally are the humanly devised constraints that shape human

5 See Williamson 1975, 1985; North 1990; Coase 1984; March and Olsen 1989; DiMaggio and Powell 1991; Gunnarsson 1991; Hall and Taylor 1996; Drobak and Nye 1997); Hira and Hira 2000 are but a few of an extensive list.

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interaction" (North 1990a, 3; see also Lane 2000, 217).[6] The guiding view here is that institutions shape choices and interests.

Institutions are both formal and informal. Formal institutions include property rights and contracts, rules and arrangements for how markets should operate, organizational rules and rules governing exchange and interaction (Claque 1997, 18). These are interpreted and enforced by political authority. Informal institutions refer to cultural norms of behaviour and societal codes of conduct that govern interaction. Cultural institutions are derived from information and attitudes transmitted socially, relate to basic values (e.g. beliefs about acceptable and unacceptable behaviour) and are part of society's culture (North 1990a, 3-4; Shaffer 1995; Eskelinen 2001, 54).

Levy and Spiller have united these meanings into a more explicit ordering detailing a nation's institutional endowment (1996, 4-7). Firstly, there is the *judiciary,* the interpreter and enforcer of laws. Secondly, these laws are in turn made by the legislature who, with the elected executive, constitutes a nation's *political institutions*. The ability of democracies to solve problems such as social integration and economic development depends on the political institutions they choose. The third component—a*dministrative endowment*, refers to the characteristics and capacity of public organisations to manage and implement policies. A serious problem that has affected administrative institutions in developing countries and in turn, their ability to manage the development agenda, has been weak capacity and expertise. The quality or efficiency of civil servants, types of interactions between governments and their social and economic environments are important (Turner and Hulme 1997, 90). So too is the extent to which organisations are equipped to carry out their mandate. Administrative capacity, like the other forms of endowment may be efficient or inefficient, positive or negative. In this case, the regulatory institutions or framework governing the financial sector will include all the rules (formal and informal) and legislation that proscribe the activities of actors providing financial services and the agencies tasked with enforcing these rules and legislations (see Goodhart 1998; Lastra 1996; Hewitt 1999). Together the actors, rules and legislation consti-

6 This definition also finds resonance in that given by Jones and Mills which describes institutional endowment as the political and administrative arrangements and its various structures, processes, relationships, viewpoints, norms and values (1989, 105).

tute an ecosystem which is termed here as the regulatory space (Minto-Coy 2009).

Finally, *cultural institutions*, the fourth, refer to norms and customs along with the nature and balance of power between contending groups in society. Cultural endowment can be seen as the genetic and cognitive processes of the citizenry. They make it possible for the past to be connected with the present and future and are important in explaining historical change (Clague 1997, 18) and path dependency.

It could be argued that it is in the particular cultural context where many of the problems and issues, that often affect success within a nation's formal institutions (political, judicial and administrative institutions), reside. Cultural institutions (e.g. norms) are pervasive and can affect the functioning of other institutions positively or negatively. For example, cultural institutions, can affect the regulator's level of performance, how it carries out its responsibilities, and its ability to change or accommodate new efficiencies. The culture existing within the regulatory space, and organisations within this space, may not be facilitative of reforms, especially those which constitute a threat to the status quo, the distribution of privileges or even where past experiences (good or bad) have seeped into the DNA of an organisation to condition what it deems possible.

While institutions can solve problems of coordination and production, their ability to do so will depend on how players are motivated and the types of incentives which exist. Behaviour and responses can therefore be changed through the structure of incentives governing the way they negotiate and participate in the regulatory space towards compliance. Such incentives can be at the disposal of regulators and include the threat of punishment to the extension of licenses, or even the introduction of reporting requirements, which are central to compliance.

The above suggests the need for institutions to be responsive, in order to take in the realities of a changing and shifting environment, including technologically informed shifts. In other words, institutional capacity is not static. Not only must it be built, supported and enforced, it must also be updated and reinforced to enable the system to remain responsive to present and future demands and innovation. But the ability to build institutional capacity also suggests that such capacity can be destroyed or

undermined by the actions of players within the regulatory space. Commentators have been keen to underscore this point, arguing that not all features of a nation's institutions are conducive to the needs of a modern economy and may instead propagate inequalities and dominance by elite groups (Engerman et al. 2000, 119-120). Additionally, institutions vary across countries and geographical locations. For this reason, the nature of a nation's endowment has been used to account for cross-national differences in development (Haskell and Teichgraber 1993; Eskelinen 2001, 54).

Finally, while formal institutions are susceptible to immediate change from judicial or political decisions, informal institutions tend to be harder to change. Entrenched customs, traditions and culturally derived codes of conduct can prevent cultural change within an organisation or system. This makes them more unresponsive to deliberate or immediate trends since culture is not easily destroyed or changed (North 1990, 60). For instance, a risk averse culture may not facilitate the flexibility and responsiveness for innovations and entrepreneurship to emerge or take root. In essence, institutions will affect the extent to which innovations will be utilised. This requires regulators and managers who are guided by knowledge and understanding of their regulatory space, who possess both power and desire to order their environment to reduce risks, while encouraging growth-inducing innovation.

METHODOLOGY

The article is built upon a case study of the adoption of mobile banking in Jamaica and Kenya. The two countries are markedly different in terms of size, geographical location and population). Jamaica appears to outperform Kenya in some key development indicators including, life expectancy (75 to 62) and literacy. Nonetheless, both also rely on remittancing, seen as a push factor for mobile banking (Maimbo, Saranga and Strychacz 2010; Minto 2009 and 2011). As one of the most successful developing countries in the area of mobile innovations, Kenya offers an excellent base from which a discussion on context in this area can be investigated, allowing for the uncovering of key points which can be used as markers in other contexts. The cases will cover the period from which both countries began actively contemplating the prospect of mobile banking (2006 for Kenya and 2011 for Jamaica) to as recently as 2015.

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Table 1: Select Indicators for Jamaica & Kenya

Indicator	Jamaica	Kenya
GDP Growth Rate	0.9	5.65
Location	Caribbean	Africa
Land Mass	10,911 Km^2	582,650 Km^2
GDP Per Capita (US$)	5, 137.92	1376.51
Population	2.73 million	46.1 million
Net Migration	-97000	-50000
Life Expectancy	75	62

Source: http//country-facts.findthedata.com/173-184/Kenya-vs-Jamaica

The area of mobile banking, from a developing context, offers an excellent case for analysis given the implications for countries in the Global South vis-a-vis the North. Namely, financial inclusion is far more advanced in the developed world, making inclusion via mobile phones a very relevant issue for developing countries. Indeed, as noted earlier, the mobile phone is perhaps the fastest diffused technological device in the developing world, giving new meaning to the ubiquity of technology in such contexts.

PRESENTATION OF CASES

The following sections will present Kenyan and Jamaican case studies in mobile banking. Underlined throughout is the role of political and administrative institutions, as well as the intertwining of these with cultural institutions. These affect the time frame in which each has been able to adopt mobile banking. Ironically, the suggestion is that the relative maturity of Jamaica's regulatory regime and path dependency may have coalesced to stymie the introduction and growth of mobile banking, slowing down, rather than stimulating, growth of small business enterprises, as experienced in Kenya.

The Case of Kenya's M-Pesa

M-Pesa: How It Works

Once registered on the M-Pesa system, customers can pay money into their mobile wallet by handing cash to one of over 83,000 agents (typically in a corner shop selling phone credit), who credits

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the money to their account. The money is held in a trust account overseen by a trustee and is spread across a number of banks in order to reduce the risk of insolvency of any one bank. The trust account is also separate from Safaricom's accounts guarding against use by the company and from claims related to the parent company. Once registered to the mobile account, the customer can then send money to other individuals or merchants using a menu on the phone over the SMS network. An important point here is that M-Pesa does not rely on the Internet (as in e or electronic banking. Any customer can withdraw money received by visiting an agent, who checks that there are sufficient funds in the mobile wallet before debiting the account and handing over the cash. Income is earned when customers transfer or withdraw cash.

The Emergence and Evolution of M-Pesa

M-Pesa emerged in a context of low access to traditional banks and financial services. In 2006 only 18% of Kenyans had access to formal financial services (Muthiora 2015); according to a Financial Access Survey of June 2006 only 1.5 bank branches and 1 ATM existed per 100,000 citizens while, banks were moving to close some rural branches given high maintenance costs. Developments here contrasted unfavourably with mobile banking where penetration was around 30%. The indication was also for faster future growth (see Muthiora 2015, 9). Maimbo et al. (2010) have highlighted the effect of remittancing as a push factor for the adoption of mobile banking in Africa and Kenya, focusing on internal remittancing of workers from the cities to rural communities.

One of the most noteworthy points for the present purpose, is the length of time between the introduction of M-Pesa as an idea to the regulator and the commencement of operations. In August 2006 the firm behind M-Pesa, Safaricom,[7] a Kenyan Mobile phone operator approached the Central Bank of Kenya (CBK) about the possibility of starting M-Pesa.[8] By February 2007, the CBK issued a "Letter of No Objection" allowing M-Pesa to officially launch its business in March 2007. Thus, the time between the expression of

7 Safaricom is in turn partly owned (40 percent) by Vodafone.

8 An earlier application had been made for a pilot of M-Pesa as a micro-finance repayment tool. However, upon completion of the pilot the firm then moved to a new application for the operation of M-Pesa as it exists today (Muthiora 2015).

interest to company launch was around 8 months. This signalled the regulator's determination to move forward in providing a facilitative environment for M-Pesa's operations.

The decision by the CBK was preceded by the Bank's detailed assessment and due diligence checks of M-Pesa's security system, business continuity plans, and risk management programme (Muthiora, 2015). The CBK's review of Safaricom's application took place over a period of five months and was done by a team which included banking officials. Legal opinion was also sought with a determination that M-Pesa was not a banking business, particularly given that:

> Neither the service provider nor the agent accepts the cash exchanged for e-money on current account, nor do they use any of the money to lend, invest, or for any other purpose for its own account and at its own risk. (Muthiora 2015, 10)

As such, the money (now e-money) remained in the customer's control after being handed over to the agent. The latter determination more than anything else, may arguably be credited with the fast pace at which Safaricom moved from idea to market.

The CBK did not have the legal framework to introduce regulations governing payment services and so the decision to move ahead with M-Pesa's application could be considered a bold move on its part.[9] Nevertheless, M-Pesa was allowed to commence operations with the understanding that the relevant regulatory framework would be developed after the fact. This is not to suggest that M-Pesa evolved in an institutional void. Rather, the CBK kept oversight with the risks initially identified in Safaricom's application forming the benchmark for Safaricom's full market and prudential reporting. As such, legal and regulatory requirements have been imposed on the firm even as they too have benefitted from other regulatory and legislative policies subsequently introduced by the Kenyan Government. These include a policy to exempt all financial services from VAT in 2009, and reform to the Banking Act allowing agent banking in that same year. The decision to allow the firm to receive international remittances (through Western Union) was also a bonus, increasing Safaricom's business and clientele. Some of the rules that M-Pesa has been subjected to

9 Indeed, it was only in 2012 with the introduction of the National Payment System Act that the CBK received official authority to do so.

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also relate to the requirements of Kenya's international commitments with M-Pesa agents becoming 'reporting institutions' under the Proceeds of Crime and Anti-Money Laundering Act (2009).

M-Pesa's growth has been tremendous, moving to 2.5 million by 2008 and 20 million in 2015. This is noteworthy in a country where the adult population is around 26 million. Customer satisfaction is also a marker of growth and success here. A 2008 survey of 3,000 M-Pesa users, showed high usage and product confidence in the firm's offerings. In 2013, access to formal financial services for Kenya's bankable population stood at 63%, up from 26% in 2006. By 2015, Safaricom was the most profitable firm in Central and Eastern Africa and the dominant mobile operator controlling 75.6% of the voice market with this dominance coming thanks to M-Pesa. The remaining operators are Airtel with 16% and Telkom Kenya with 8.4% of the market. Safaricom's dominance extends to 93% of SMS, 70% of mobile data and 66.7% of the mobile money markets respectively (Central Intelligence Agency 2015; Ipsita 2015; Muthioria 2015; Ochieng 2015).

Perhaps threatened by M-Pesa's growth, the Kenyan Bankers Association later (2008) applied pressure to the Ministry of Finance to review its determination and to assess M-Pesa's health; or in the words of Mbugua "to kill" M-Pesa (2008). This was carried out by the National Treasury and CBK in 1999. Their audits found all was well and the firm was given the right to continue its operations. Interestingly, the decision to review M-Pesa's approval did not come from the CBK but from the Minister, following lobbying by bankers to review the firm's operations. Muthiora (2005) has suggested the Minister did not fully understand M-Pesa's operations and its implications. This is relevant since it meant that it was easier for the minister to be captured by the bankers.[10] Also suggested is the important role of politicians in the regulatory space, including their knowledge of and appetite for innovation, which must be considered alongside the desire for political survival. This is so given that their level of support can determine if they are swayed by rival interests in the regulatory space, and their subsequent actions. A major complaint from the banks was the fear that the M-Pesa model would lead to disintermediation and a decline in the use of tradi-

10 That is where a regulator regulates in the interest of special and private interest groups (e.g. business or political) rather than the public interest (See Makkai and Braithwaite 1992; Laffont and Tirole 1988).

tional bank accounts (Muthiora 2015). However, as suggested by Mas and Radcliffe (2011), there has been little basis for this concern.

Challenges to M-Pesa's growth have come not only from the banking sector but also from its competitors in telecommunications. As M-Pesa and Safaricom have become more profitable, there has been a move by its competitors to have Safaricom officially declared dominant and so face stricter regulations. Indeed, the Communications Authority of Kenya, had by 2015, moved to partner with the competition regulator (the Competition Authority of Kenya) and secured support from the International Finance Corporation to increase capacity to regulate against unfair competition and prevent abuse of dominance (Ochieng 2015). Additional regulations have also seen Safaricom being forced to allow its agents to host the services of other providers and to adopt separate accounting practices. Regulation after the fact has helped M-Pesa's growth somewhat. However, "the regulate as we go" approach has allowed the development of regulatory tools specific to mobile banking, now used to regulate entrants as well as M-Pesa. For example, the letter of no objection initially issued to M-Pesa subsequently became the standard given to other applicants with similar terms. Through this, the risk of direct bias in the legal and regulatory framework or of privileging one operator over another has been reduced.[11]

M-Pesa has expanded well beyond the basic remittance services originally conceived. This includes M-Shwari, one of the latest innovations which seeks to encourage Kenyans to save and access loans. Here the customer's mobile number is the security, which can be taken away in the case of a default. An additional range of financial services have also been introduced and includes payment for everyday activities such as savings, school fees and electricity bills, as well as pensions, salary disbursements, a prepaid credit card, loan repayment and insurance. Partnerships have been forged with banks and other traditional financial institutions. Thus, whereas banks were actively lobbying for a review of M-Pesa in 2008, by 2009 partnerships were being formed with micro-financing and traditional banks allowing then to innovate along the M-Pesa network, offering start-up funding and loan repayments (see also Muthiora 2015, 8).

11 Though one could just as easily argue that the slow pace in evolving regulations, including determination of dominance and the 2012 National Payment Act, which up to 2014 had not been enforced, could indicate industry capture.

Expansion has been felt beyond Kenya as well. Indeed, the 'M-Pesa effect' has spread to neighbouring countries with the mobile phone as a financial device now becoming more commonplace in Africa. The proliferation of cross border financial transactions has also been noted, with benefits accruing to small businesses as well as mobile operators who are striking up innovative cross border partnerships to facilitate mobile financial transfers (see Maimbo et al. 2010; Wexler 2015).

A Strong Case for Mobile Banking in Jamaica?

The idea of mobile banking has long been discussed in Jamaica. In 2008, for instance, an Inter-American Development Bank (IDB) study examined the introduction of mobile-banking in Jamaica as a gateway to its introduction in Latin America and the Caribbean. Legislative support for mobile banking was recommended. Private entities operating in the banking sector also expressed interest in entering the market. A major highlight for the examination of mobile banking in Jamaica was a 2011 study led by the Mona School of Business and Management. The study found that roughly 34% of the population was unbanked and around 85% had limited access to low-cost, efficient, and easily accessible payments channels. Furthermore, while close to 65% of Jamaicans were banked, only 14% actually had transactional accounts (Elliott 2011). At the time, mobile penetration stood at around 120% representing a largely untapped potential to increase banking penetration and meet unmet demand in financial services. The potential for expanding economic activity were Jamaicans able to conduct financial transactions more efficiently and conveniently, was also noted. The mobile phone was portrayed as a tool through which low-income Jamaicans could receive bespoke financial services, leading to greater financial literacy and inclusion.

Beyond these findings, other indicators pointed to the potential value of mobile financial services in Jamaica. Namely, the existence of a strong diaspora population estimated to be at least the same size as the local population of roughly 2.7 million, the historical and ongoing proclivity towards migration, and the significance of remittancing, the bedrock of the migrant and diaspora's engagement with Jamaica and the wider Caribbean (Minto 2009). The latter was estimated at roughly 14.5% of Jamaica's GDP

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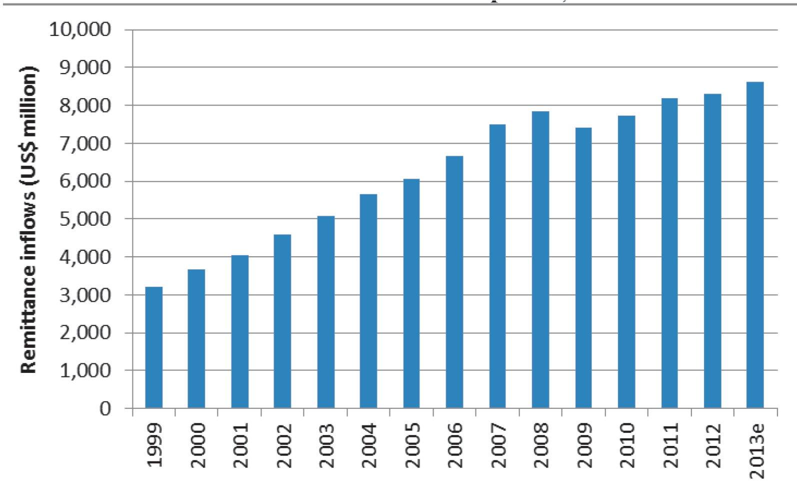
in 2014 (Figure 1) rivalling the main foreign exchange earner and contributor to national income (tourism) (see Minto-Coy 2010). These present added incentives for Jamaica to consider the role of mobile banking as an economic enabler for achieving cost-reduction for senders and recipients via lower transaction fees.

Figure 1: Remittance Flow to the CARICOM Region (including Haiti and the Dominican Republic)



Note: No data available for The Bahamas and Montserrat

Source: Minto-Coy (2016a: 126).

Mobile phone users are also proficient in areas such as SMS text messaging, an indication of potential ease of usage given existing familiarity with the technology. The potential for conducting electronic payments and remittancing is also an incentive for the use of mobile banking in reducing robberies and other crimes related to cash-based transactions. Finally, while access to bank branches and the ratio of ATM machines to customers were higher than in Kenya, i.e. 6.64 per 100,000, access remained an issue.

The above suggests the existence of a number of success factors that seemed to indicate a desire and likely success *for* and ultimately, an aggressive move towards mobile banking. However, following the findings of the 2011 study it was only in April 2013 that the regulator, the Bank of Jamaica (BOJ) issued a set of "Guidelines for Electronic Retail Payment Services". This furnished

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the guidelines for providers of electronic retail payment services, including mobile payments.

An important point of departure from Kenya was the designation of mobile banking as being anchored in the Banking infrastructure. The maturity of Jamaica's banking sector relative to many other jurisdictions in developing countries, meant that electronic payments had already been contemplated and defined as a banking issue in 2006. As a consequence, a fast moving innovation was placed in the context of a risk-averse industry and society (see Tracey and Leon 2011; Blavy 2006; Levit 2000). With this determination, the pace of the innovation was essentially stalled with the view that enabling legislative and regulatory frameworks had to be in place before firms could commence operations. The June 2014 Banking Act saw commercial banks and other deposit-taking institutions being authorised to use agents in the delivery of banking services. By July 2014, 13 applications had been received by the BOJ to provide electronic retail payment services primarily using mobile devices. Between September and December 2014 a number of authorised pilots or trial testing of mobile banking services were carried out by several of the applicants, but still little implementation or commercialisation had occurred up to 2016.

One promising sign was the purchase of a financial services firm (Prism Holdings) by the largest mobile operator, Digicel in December 2015. The acquisition was to be used as the platform for mobile money services in Jamaica.[12] Interestingly, the firm noted that it would be offering mobile money "as soon as the regulatory environment permits" suggesting that the regulatory environment may still be a constraint.[13] The application for an operational licence is to be made through the partner bank—Sagicor Bank (Graham 2015).

LESSONS FROM MOBILE BANKING ON THE BARRIERS TO INNOVATION AND ENTREPRENEURSHIP

Safaricom's experience suggests a real potential exists in the use of mobile banking as a tool for increasing access to capital and financial services for the poor and unbanked, with positive conse-

12 Interestingly, mobile financial services are already on offer by Digicel in Haiti (Mon Cash).

13 Quote from Digicel official Antonia Graham (Graham 2015, 4).

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quences for poverty alleviation and empowerment. In contrast to the rapid emergence of mobile financial services in Kenya, Jamaica has struggled with the mobile ecosystem not evolving as in Kenya. Why has Jamaica not been able to advance, even as it has been recognised as having the pre-conditions to make mobile banking an attractive value proposition for firms, government and the public at large?

The answers we feel lie in the specific nature of institutions and endowment and the extent to which they act as a constraint or enabler of innovation. Each of the cases hold interesting lessons as it relates to the role of institutions and practices on innovation and entrepreneurship. The cases also demonstrate the role of the state, specifically, administrative and political institutions in providing a facilitative environment for innovations and related entrepreneurial activities to emerge and flourish. A related consideration is that institutions can determine the time it takes for an innovation to move from an idea to reality. In this way, path dependencies impact the approach to and perception of new ideas/knowledge (as risky or not) and the activities of actors within the regulatory space. Finally, the Kenyan case also suggests clearly that innovation breeds innovation. These points will guide the discussion that follows.

Institutions Determine the Time it takes for Innovative Ideas to Become Reality

Institutions help to determine the pace of innovations. That is, whether it will be rapid or slow (Sorvik 2010). Regulatory institutions are shown as having a significant role here as gatekeepers and in mediating between different interests, determining if and how new business ventures and ideas find the space to take root. Moving an innovation from an idea to reality is seen as having important consequences for competition, enthusiasm among players, and implementation.

In the Kenyan case, it took under one year from the point of Safaricom bringing the idea to the CBK, to launch. It has been noted that the activities of the CBK suggests how a public sector body can facilitate entrepreneurship through proactive regulation. Indeed, even while operating in a relatively short time frame the CBK's activities were not erratic but based on its own investigations into Safaricom's proposals. Going beyond this view, a look at the National Development Plans of Kenya also suggests some of the

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basis for the CBK's actions. That is, Kenya's Vision 2030 document notes the importance of improving financial inclusion and savings as a path to growth, competitiveness and prosperity of Kenyan society and economy (GoK 2008). For sure, the number of agents created is an indication of the potential which this and other innovations have for the growth of the small business sector and employment, generally. In the case of Jamaica, only one company had developed a commercial mobile wallet product up to January 2016, with the slow pace in developing facilitative regulations dampening enthusiasm. The reality then may be that the Jamaican system (at least for mobile banking) is more prone to slow and incremental innovations.

Risk-Averse Institutions and Path Dependencies

Relatedly, the legal and regulatory barriers featured in the Jamaican case, support a notion of path dependencies, or history, as a constraint on current options and strategies with the norms and customs (i.e. Cultural institutions) in the regulatory space determining what is possible or not. For Jamaica, it is the hardwiring of certain institutional features that have constrained the ability to change, identify new opportunities and allow for a flexible environment in which innovations can thrive. Jamaican culture (including among businesses) has been noted as risk-averse while the pace in framing and updating policies and regulations has often been slow and laborious (see e.g. Minto-Coy 2016b). There has sometimes been a propensity towards conducting studies, consultancies and pilot tests which postpone or slow implementation. A result has been the adoption of new knowledge, sometimes a decade behind other countries (see e.g. Minto-Coy 2009). Thus, whereas the safety of the financial system is a critical imperative to regulators, it is the case that leadership and oversight also require openness to facilitate new models, where this implies extended access for underserved groups. Like Kenya, Jamaica also has a National development (2030) plan with similar ambitions (see GoK 2007 and GoJ 2009). The challenge remains unearthing ways in which the objectives of such plans can be met in a regulatory space, where the culture and rules limit the ability of actors to exploit technological innovation and knowledge as envisioned by Fagerberg (2007).

The determination of mobile financial services as a banking issue in Jamaica has meant that mobile banking has been placed in

a risk averse industry—banking. Banking in Jamaica is noted as being slow with high fees that affect formalisation. The constraining effect in the case of Jamaica is the slowing down of the pace in which innovations or new ideas have emerged in mobile banking.

Nonetheless, some basis for Jamaica's 'softly, softly' approach may reside in the banking and financial sector crisis of the late 1990s, which served to increase aversion to risk (Perry 2008, 40). That is, Jamaica is still experiencing the negative effects of that crisis, which saw a number of indigenous financial institutions going bankrupt after the liberalisation of the financial sector occurred without requisite adjustments in the regulatory regime to facilitate the BoJ's oversight (Hewitt 1999). To date, this remains one of the most impactful experiences in the financial history of independent Jamaica, with the corrective actions undertaken by the government leading to a reversal in the reduction of national debt.[14] Indeed, even where the country was to face the effects of the 2008 global financial crisis, the reversal in the downward movement of debt has not been as drastic as that experienced in the aftermath of the 1990s crisis.[15] The BoJ was blamed for the crisis, given a view that it failed to apply sanctions in some cases of abuse. Further, existing regulations did not equip the BoJ to ensure that entrants met the 'fit and proper' rule (see Hewitt 1999, 6-7). The absence of specific regulations placed such determinations with the line Minister. In areas where legislation existed, the BoJ's oversight was still noted as insufficient or poor (Swaby 2011). The challenges not only related to poor regulation:

> Throughout the 1990s, the regulatory framework essentially played "catch up" with developments in the financial sector and the resulting gap afforded opportunities for regulatory arbitrage. Indeed, the rush to push through a number of legislative measures in December of 1997 after the emergence of the crisis is one indicator of the extent of this lag.
>
> There is also some evidence indicating that the design of legislation for the financial sector was captured by vested interests and that this may have accounted for some of the ineffectiveness of the measures that were actually implemented in 1992.
>
> (Hewitt 1999, 8)

14 That is, debt moved from 194% of GDP in 1991/1992 to a low of 71% by 1996/1997 to 87% in 1999/2000 and 125% by 2002/2003 (in Johnston and Montecino 2011, 3).

15 For illustrative purposes, see Figure 1 in Johnston and Montecino (2011, 3).

Thus, the past experiences may now have interwoven into the formal culture and modus operandi of the Jamaican regulator and regulatory space becoming part of the regulator's institutional DNA.[16] As noted by Edmonson, "adaptation to the regulatory background diminishes . . . incentives to innovate" (2009, 137). The BoJ has been slow in moving forward, choosing to engineer regulations before sanctioning the start of mobile banking. There is then some dilemma in the extent to which path dependence can be addressed to facilitate speedier adoption of innovations needed to spur entrepreneurship and growth in a stagnating Jamaican economy. There has also been a tendency to hardwire regulations in contracts and laws in Jamaica to heighten credibility and assure investors against arbitrary government action (See e.g. Spiller and Sampson 1996).

This is also seen in the insistence on establishing a regulatory framework before mobile banking could commence. This is not to say that Kenya does not face the same issue of arbitrary action. Rather, the legal and regulatory landscape in Kenyan telecommunications may not be as advanced as Jamaica's, facilitating a more trial and error approach which will see innovations taking a shorter time to come to the fore, especially where they do not appear to directly go against established interests. Thus, issues of unfair competition with Safaricom were only addressed in July 2015 (Ochieng 2015), having been addressed in Jamaica as far back as the late 1990s (see Minto-Coy 2009). Furthermore, while US laws relating to finance and banking were an issue for Kenya, this was, arguably more so for Jamaica given the proximity and level of interconnectedness with and dependence on the US economy.[17]

Having the advantage of undertaking mobile banking ahead of many countries, Kenya was also able to move ahead speedily. That is, opposing interests had not yet been consolidated and relevant sector rules had not yet contemplated this issue. Having the Kenyan case in full view, on the other hand, meant that stakeholders in Jamaica may be more understanding of what was at stake for the different players. Interests in the Jamaican banking

16 It is interesting to note that mobile money is not necessarily as risky as portrayed by Jamaica's regulatory approach given Muthiora's suggestion that it in fact does not introduce risks to the financial system (2015, 8).

17 Thanks to one of our reviewers for this very salient point. Authors such as Plummer (2011) and Early (1998) suggest the existence of a US-hegemony over Jamaica and the rest of the Caribbean.

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sector are arguably more organised and vested when compared with other groups and individual private entities, who would be approaching mobile banking as competitors rather than allies. One argument then, is that the operations of M-Pesa emerged in a context of institutional void, given the absence of precise regulations and a blueprint for oversight, until recently. Nevertheless, the Kenyan case does demonstrate ways in which, regulators can, in fact, facilitate the introduction of innovations in contexts of regulatory uncertainty. That is, through the facilitation of a close relationship between regulator and regulatee, to the extent that the former is able to provide close oversight via ex ante regulations and reporting standards. This took place with the ultimate goal of developing a specific regulatory framework informed by the evolution of the market. The firm in turn adopted a conciliatory approach, ensuring that it remained transparent and responsive to the regulator's queries and requests. Of course, the risk of capture is real in such a context, but where both parties are bent on transparency, with the scenario being viewed as a defining opportunity, the Kenyan case may arguably have avoided such a risk.

Innovation Spurs Innovation

As per Fagerberg and Bart's (2003) reasoning, Kenya has been able to adopt and utilise new knowledge, while the institutions in the regulatory space were facilitative of the application of this knowledge. That is, innovation spurs innovation, creating the space for entrepreneurial activities with a ripple effect throughout the economy and society. Indeed, a digital ecosystem has emerged. This is seen, for instance, in the partnerships that have emerged to deliver banking and other financial services including new business start-ups and loan repayment via the mobile phone. Further evidence is seen in traditional banking where new clients have been accessed, while the mobile phone is now a crucial aspect of everyday life (e.g. in sectors such as agriculture and health). Developments in Jamaica have still not reached the levels seen in Kenya.[18]

The innovation spurring effect of M-Pesa is not restricted to Kenya but is now trans-border, with interesting partnerships and

18 For instance, it has been suggested that the pace in the development of innovations around the mobile phone that was expected with liberalisation and competition in telecoms has been slow. This is the case around the development (Minto-Coy 2016c) and scale up of business solutions.

businesses emerging around this one innovation, to the benefit of the Continent and especially the Sub-Saharan region. Opportunities have been created for regional interaction, with the M-Pesa effect somewhat mimicking the agglomeration (concentration or gathering) effect of innovation on regions (see Martin and Ottaviano 2001, for discussion of this concept). That is, other countries in the region have seen businesses emerging in Kenya and its neighbours as a result of M-Pesa. Deeper cross-border engagement may also advance interconnectivity, while encouraging a healthier ecosystem around mobile financial services. Such potential is not to be scoffed at for Jamaica and the Caribbean, where the development of mobile financial services in the largest English-speaking Caribbean territory could also have an impact in driving more trans-border financial transfers and enterprise development envisioned in the Caribbean Single Market and Economy (See Hall and Chuck-A-Sang 2007 for background and discussion). Existing labour migration among Commonwealth Caribbean countries, who also share common telecoms and banking services providers, are also indicators of the potential here.

Beyond revolutionising financial services and mobile industries, the firm's activities have also helped to expand the view of 'collateral' and 'assets' in the world of business, even as it exemplifies new entrepreneurial technology-driven business models. For instance, in the case of M-Shwari, a phone number is now an asset. In a country where the mobile phone is a vital part of everyday existence then a high premium is placed on one's phone number. Also demonstrated is the extent to which the mobile phone has moved from a necessity for everyday social communication to becoming a tool for business facilitation and financial inclusion. Expansion in the number of services and uses of M-Pesa have, therefore, helped to bring ICTs and technology more into the fore and visible day-to-day experiences of Kenyans. Financial engagement and inclusion are more a basic aspect of citizenship.

CONCLUSION: INSTITUTIONS MATTER!

The article has sought to assess the role of institutions in innovation and entrepreneurship in mobile banking, using Kenya and Jamaica as case studies. In so doing, why has Jamaica been slow in adopting mobile banking compared to Kenya, which was able to introduce

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this innovation? Using the frame of institutional theory, we argued that context and specifically, Jamaica's institutional endowment, help to offer an explanation for the slow pace in the development of the mobile banking ecosystem and the emergence of enterprises and entrepreneurship around this innovation. Underlined throughout is the role of political and administrative institutions, as well as the intertwining of these with cultural institutions. These affect the time frame in which each country has been able to adopt mobile banking by conditioning the rules, regulations and practices in the regulatory space and how regulators approach innovative business ideas. Ultimately then, institutions matter. While it is understood that institutions help to create order and reduce uncertainties, the lesson here is that path-dependencies and risk-averse institutions can dissipate interest in new knowledge, stalling the adoption of innovations and entrepreneurship. Ironically for Jamaica, the suggestion too is that the relative maturity of that country's regulatory regime and path dependency may have coalesced to stymie the introduction and growth of mobile banking, slowing down the growth of small business enterprises experienced in Kenya.

The institutional context also helps to determine winners and losers as well as the types of incentives (carrots) and punishments (sticks) to be introduced. It also influences how firms and sectors perform and the extent to which innovations will be supported and how (rapid or gradual adoption). Importantly though, as is suggested in the Kenyan case, institutions have also to innovate and reform in order to keep abreast of changes in the regulatory space and not remain static. In this case, the regulatory environment in Kenya has been evolving alongside the developments in the telecommunications sector, with regulators securing external support and local partnerships to bolster regulatory capacity (Ochieng 2015). The question from these developments is the extent to which a more mature regulatory space in Jamaica can, in fact, offer the flexibility for fast paced innovations to emerge and drive enterprise development.

What then is the role and model for the state and regulation in such a context? This question harps back to a longstanding and contended research theme relating to the role of the state and government regulation in the economy. Indeed, Friedrich List in 1841 (in Freeman 1987; Peters 2006) noted earlier that the role of the

state (and here regulation) in fostering innovation is to be proactive. To this end and as suggested by Peters " . . . it is what the state did and how it did it" (2006, 19). Based on the findings, we suggest light touch and responsive (not captured) regulation, with regulators keeping a close eye on actors and developments in the regulatory space. Where there may be an absence of legal and regulatory institutions or precedence, the suggestion is an approach of light regulation, while utilising other mechanisms (e.g. reporting) in lieu of specific laws. This instead of waiting until an adequate regulatory framework is designed. Arguably, a strong case exists for this approach in the context of rapidly emerging technological innovations that have the ability to impact society, business and the nation, positively. The discussion also brings home the role of government and business in growth and specifically, the place of public policy and regulatory culture in determining the pace at which innovations and entrepreneurial ideas flourish.

The attention to institutions also brings into focus the importance of discussing institutional endowment or path dependence in discussions on innovation, entrepreneurship and growth. This need not be in a spirit of apathy, but from an awareness that knowledge of institutional endowment may assist policy-makers and firms to understand the context in which they operate and, from there, how to configure policies and strategies towards overcoming the limits.

Moving forward, it is clear that the legislative and regulatory frameworks imposed in the mobile banking sector will determine the rate of development, scalability and scope of entrepreneurial initiatives. Importantly, too there are instances where a slow approach can be understood. However, responsive and informed regulation is knowing when to adopt a slow deliberate approach and when to facilitate rapid movement. For Jamaica, the regulatory response should therefore be informed by an incremental, adaptive and proportionate approach that balances the multiple goals of financial inclusion, innovation and entrepreneurship, while maintaining the stability of the financial system. Indeed, writing in 1999 of the financial and banking sector crisis and speaking specifically to the blurring of lines between different financial products, Hewitt notes, "the challenge for financial regulation in Jamaica is not how to maintain institutional separation but rather how to manage the risk that is associated with this mix" (1999, 12).

Almost two decades later, and speaking directly to the blurring of lines between what can be considered a financial vs. a telecoms business, the recommendation still obtains. That is, perhaps focus should not be on definitions, but on ensuring that management and disclosure requirements are engineered so as to reduce risks and related problems. Indeed, given the pace of technological developments in speeding up the rate at which formerly separate sectors and themes are converging, then indeed this recommendation may have resonance far beyond the specific focus of this article.

Implications and Limitations

Finally, a number of points also emerge from the article as it relates to a further research agenda. Among these is which institutions matter and possibly for what type of innovation.[19] The case could be made that Kenya is by no means a good comparator for Jamaica given the different contexts. Nonetheless, divergence can in fact, facilitate comparison.[20] The broader point, however, is that context and institutions matter and to the extent that learning takes place across borders, there are inherent lessons for understanding the role of institutional endowment as a facilitator or constraint and in specific sectors. For Jamaica, conservative and slow-paced regulation in the mobile banking sector has clearly been an enemy to innovation and entrepreneurship. The focus on one specific type of innovation (technology-based/ICTs) may limit the wider applicability of the findings or at best, the suggestion may be that a number of intervening factors such as the nature/type of innovation or even timing may need to be considered. Indeed, further studies could seek to identify the appropriate mix of institutions or conditions that would enable innovations to take route.

For sure, the focus on two countries may naturally limit the extent to which the findings can be extrapolated. However, a qualitative assessment of the barriers to innovation and entrepreneurship allows for the uncovering of information which may go towards other qualitative (and quantitative) assessments of other jurisdictions and sectors. This is so given the general interest in innovation, entrepreneurship and development. Nevertheless, the

19 Indeed, the Kenyan success has been attributed to the regulatory framework but also to the existence of a private sector willing to invest and an adaptive citizenry (see Muthiora 2015).

20 Thanks again to a reviewer for this point.

research suggests the role of policy and regulation (governments) in improving the lives and living standards of citizens; offers guides to how governments in developing countries can regulate for and facilitate innovation, particularly in contexts of perceived institutional voids.

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Obstáculos al Emprendimiento y la Innovación: Un Análisis Institucional de la Banca móvil en Jamaica y Kenia

Indianna Minto-Coy

La alta penetración de los teléfonos móviles es uno de los desarrollos tecnológicos más significativos de la historia humana, el cual promueve una serie de innovaciones y oportunidades empresariales. Estas incluyen la realización de transacciones monetarias a través del teléfono móvil, lo cual promete revolucionar el acceso a servicios financieros y oportunidades de negocios y el emprendimiento en los países en desarrollo. Sin embargo, considerando que la banca móvil a través de M-Pesa ha revolucionado los servicios financieros y el acceso en Kenia, su adopción en las islas del Caribe como Jamaica ha sido lenta; esto al mismo tiempo que demuestra un caso fuerte para su adopción. Apoyándose en los estudios de caso de Jamaica y Kenia, el artículo plantea por qué los países no han sido capaces de adoptar esta innovación. Sugiere que al centrarse en el contexto y en la dotación institucional, la teoría institucional ofrece información sobre el por qué algunos países son capaces de adoptar innovaciones y emprendimiento y otros no. El artículo fundamentalmente enfoca el papel de la dotación en la capacidad de adoptar innovaciones y crear emprendimientos relacionados. También hace la conexión entre las discusiones sobre el impacto de la reglamentación gubernamental en la determinación del ritmo en que prosperan las innovaciones y las ideas empresariales y cómo regularlo en los sectores afectados por la rápida evolución de las innovaciones tecnológicas.

Palabras clave: Emprendimiento, Empresa, Innovación, Instituciones, Dotación

Obstacles à l'innovation et à l'entreprenariat: Analyse Institutionnelle des Services Bancaires Mobiles en Jamaïque et au Kenya

La croissance de la pénétration des téléphones mobiles est un des développements technologiques les plus significatifs de l'histoire de l'humanité, entraînant un certain nombre d'innovations et offrant des possibilités d'activités entrepreneuriales. Parmi ces

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dernières, on note la conduite de transactions monétaires par téléphone portable, ce qui promet de révolutionner l'accès aux services financiers et offre des opportunités pour les affaires et l'entreprenariat dans les pays en voie de développement. Cependant, alors que les services bancaires mobiles par M-Pesa ont révolutionné les services financiers et l'accès à ces derniers au Kenya, leur adoption s'est révélée beaucoup plus lente dans les îles des Caraïbes telles que la Jamaïque ; et ce, même lorsqu'on fait une solide démonstration en faveur de leur adoption. À travers des études de cas de la Jamaïque et du Kenya, cet article s'interroge sur les raisons qui ont empêché certains pays d'adopter cette innovation. Il suggère que la théorie institutionnelle en se concentrant sur le contexte et la dotation institutionnelle apporte des éclaircissements sur les raisons pour lesquelles certains pays peuvent adopter des innovations et se lancer dans l'entreprenariat tandis que d'autres ne le peuvent pas. La force de cet article repose sur sa concentration sur le rôle des dotations dans la capacité à adopter des innovations et à construire des initiatives entrepreneuriales associées à ces dernières. Il établit également une connexion entre les discussions portant sur l'impact des règlementations gouvernementales sur le rythme auquel les innovations et les idées entrepreneuriales s'épanouissent et sur la façon de réglementer dans les secteurs affectés par des innovations technologiques à évolution rapide.

Mots-clés: Entreprenariat, Entreprise, Innovation, Institutions, Dotation.

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