



# Addressing the barriers to adoption in digital payments

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# Introduction

This report is an attempt to identify challenges and provide solutions to the issue of digital payments adoption in the Indian context. The Indian economy is a predominantly cash driven economy. While the penetration of digital payments has increased significantly in the last decade, cash still continues to dominate.

The report is divided into two parts. The first part identifies the different factors that act as barriers to adoption, and the second highlights levers that can help overcome these barriers. The following emerge as the most important findings (and lessons) from the research:

1. *Like any new technology, users are hesitant to adopt digital payments. The problem is compounded by a lack of awareness and the fear of losing money. The need of the hour is a strong grievance redressal mechanism to improve trust in the system and well-designed nudges to get users to experiment.*
2. *A supportive regulatory regime that enables innovation is crucial to increased adoption. Several steps are already being taken in this direction, but more needs to be done. This includes an accommodating framework with respect to digital payments solutions by non-bank entities, simplification of KYC norms as well as interoperability among wallets.*
3. *Upfront investment and ‘visible’ costs like MDR (as opposed to the ‘hidden cost’ of cash) tilt the scale in favour of cash. Given the positive externalities of digital payments, this bias needs to be corrected through more government support.*
4. *Offers which bundle value added services that can help merchants grow their business, as opposed to vanilla payments solutions, are likely to significantly increase the uptake of digital payments. The add-on perks could include greater access to working capital loans, inventory management and supplier mapping etc.*

Throughout the report, the primary focal points of this research continue to be two sets of stakeholders – small merchants and (bottom of the pyramid) customers. The report draws heavily on empirical research as well as case studies from around the world to gain insights into the behaviour and experiences of these sets of stakeholders.

# *Barriers to adoption*

# Barriers to adoption

## Lack of awareness and resistance to trying new platforms

According to a study released by the Boston Consulting Group and Google,<sup>1</sup> one in every two *non-users* do not use digital payments because they find it ‘too complicated’ to understand. There is also a distinct lack of appreciation for the benefits of digital payments. One in two *non-users* have never tried digital payments because they don’t understand the value proposition; they are not convinced that a switch is worth the effort.

A survey of consumers in Philippines highlights the need for strong awareness drives and marketing efforts to build a base of users. The survey found a drop-off of over 90% between consumers who were aware of mobile-money products and those who became users (see figure 1). The drop-off increased to 95% for *frequent* users.<sup>2</sup>

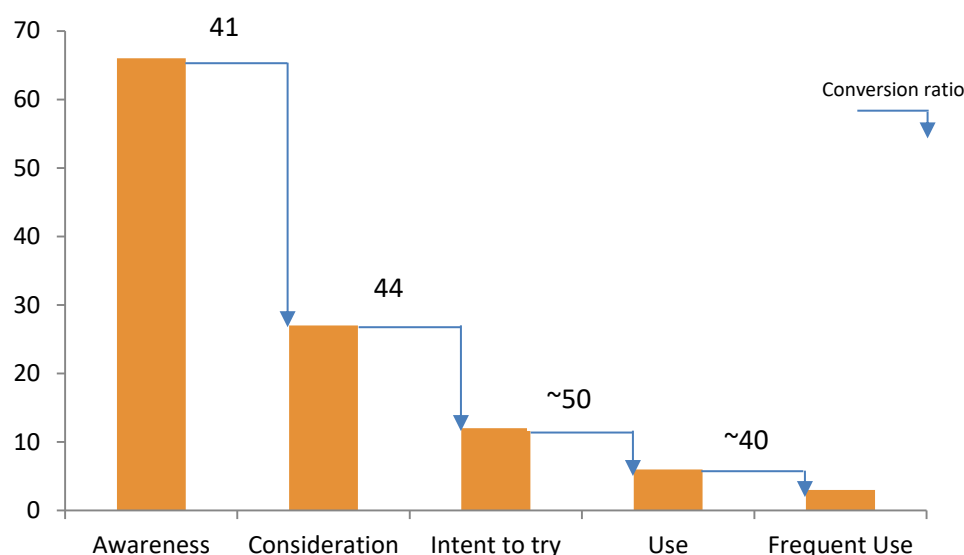


Figure 1: Comparison of mobile money awareness and perception<sup>2</sup>

For merchants, the problem seems to get aggravated because of the many different products available in the market. While solution providers routinely run campaigns to educate merchants about the features of their products and services, not many opportunities are available for merchants to cohesively understand and compare the different options.

<sup>1</sup> Shah, A., Roongta, P. et al, *Boston Consulting Group and Google*, ‘Digital Payments 2020 – The making of a \$500 Billion ecosystem in India’, July 2016, p. 24, [http://image-src.bcg.com/BCG\\_COM/BCG-Google%20Digital%20Payments%202020-July%202016\\_tcm21-39245.pdf](http://image-src.bcg.com/BCG_COM/BCG-Google%20Digital%20Payments%202020-July%202016_tcm21-39245.pdf)

<sup>2</sup> Cobert, B., Helms, B. et al, *McKinsey*, ‘Mobile Money: Getting to scale in emerging markets’, May 2012, <http://www.mckinsey.com/industries/social-sector/our-insights/mobile-money-getting-to-scale-in-emerging-markets>

## Smartphone penetration and consumption of data

Driven by the availability and affordability of smartphones, mobiles have rapidly become a gateway to the internet (and by extension, to digital payments). According to a report by the Internet and Mobile Association of India (IAMAI), 77% of urban users and 92% of rural users consider the mobile phone as their primary device for accessing the internet.<sup>3</sup>

While the number of smartphone owners is expected to grow rapidly to 340 million by the end of 2017,<sup>4</sup> a larger percentage of the population (~74%) still relies on feature phones. Therefore, one of the major hurdles in the adoption of digital payments is the lack of suitable and convenient to use options for users of feature phones. While USSD is available as an option, it is cumbersome and intimidating to use.

## The hidden cost of cash

During a study in Uganda, 75% respondents reported losing their savings (saved in cash, jewellery, or with informal savings groups) sometime during the previous year. A study of 274 migrant workmen in India found that the workmen incurred an average cost of 4.6% while sending remittances home through informal couriers.<sup>5</sup> These are manifestations of the *hidden* cost of cash.

Small merchants often deal with customers who transact in cash and with suppliers who do not mind getting paid in cash. While several studies have tried to quantify and highlight the cost of using cash (opportunity cost of time spent in cash management, theft etc.), most small merchants do not see cash as an option that entails a ‘cost’. A Focused Group Discussion (FGD) among merchants in Tanzania found that merchants shifted to electronic payments mainly because they wanted to increase sales, and not because they thought that the payment method (read: cash) needed changing.<sup>6</sup> An International Telecommunication Union (ITU) merchant report also found that while merchants factor in the more obvious costs like set up fee, rental, transaction charges etc., while making the decision to adopt a digital payments solution, they usually do not factor in the *hidden* costs of cash.<sup>7</sup>

<sup>3</sup> Chopra, A, *Livemint*, ‘Number of Internet users in India could cross 450 million by June: report’, March 2017, <http://www.livemint.com/Industry/QWzIOYEsfQJknXhC3HuiVI/Number-of-Internet-users-in-India-could-cross-450-million-by.html>

<sup>4</sup> *Statista*, ‘Number of smartphone users in India from 2015 to 2021 (in millions)’, <https://www.statista.com/statistics/467163/forecast-of-smartphone-users-in-india/>

<sup>5</sup> Radcliffe, D. & Voorhies, R., ‘A Digital Pathway to Financial Inclusion’, December 2012, p.2, <https://ssrn.com/abstract=2186926>

<sup>6</sup> World Bank at World Economic Forum, *World Bank Group*, ‘Innovation in electronic payment adoption: the case of small retailers’, June 2016, p.12, <http://documents.worldbank.org/curated/en/765851467037506667/Innovation-in-electronic-payment-adoption-the-case-of-small-retailers>

<sup>7</sup> ITU-T Focus Group Digital Financial Services, *International Telecommunication Union*, ‘Enabling Merchant Payments Acceptance in the Digital Financial Ecosystems’, May 2016, p.24, [https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09\\_2016/FINAL%20ENDORSED%20Enabling%20Merchant%20Payments%20Acceptance%2030%20May%202016\\_formatted%20AM.pdf](https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09_2016/FINAL%20ENDORSED%20Enabling%20Merchant%20Payments%20Acceptance%2030%20May%202016_formatted%20AM.pdf)

A major cost associated with cash is the time spent in cash management – mainly time spent in tendering change and back office processing. Cash management becomes increasingly time consuming as the transaction size increases. Ideally, when selecting a mode of payment acceptance, merchants should take this cost into consideration. Unfortunately, they often do not. The transaction fee associated with card payments is explicit, but the cost of managing cash is not.

Interestingly, when the Reserve Bank of Australia (RBA) conducted a comparative cost benefit analysis of different modes of payment acceptance, it found cash to be the more cost effective method for smaller transactions, primarily because of the processing time associated with PoS machines (card swiping and signing etc.). But, it also found that the cost of a cash payment increases with the size of the transaction, so that cash becomes more costly than PoS for payments of moderate value.<sup>8</sup>

RBA estimated that cash was costlier when the sale amount exceeded \$20. Of course this threshold is likely to decrease as QR codes and other contactless methods make the processing of digital payments faster.

### Speed of transaction and payment failures

Speeds of transaction and payment success rates are determined by both the strength of the internet connection as well as the nature of interoperability between solution providers, and can be big impediments to adoption. In cases of payment failure where the payment is deducted from the consumer's account but not credited to the merchant's, there is often a lag (of several hours and in some cases days) before the amount is credited back to the consumer's account. This can be especially unnerving for low-income consumers.

If internet connectivity is poor - which is often the case in India - or if a payment is repeatedly declined, merchants and consumers both start losing patience. The merchant can even end up losing business if the consumer decides to cancel his or her transaction. The 2017 Economic Survey highlights that the failure rate of interoperable online transactions between different banks was 56%, almost double the failure rate of intra-bank transactions. "One plausible hypothesis for this differential is that the larger banks are declining transactions involving smaller remitting banks while ensuring that transactions involving themselves are honoured."<sup>9</sup>

### Burdensome KYC requirements

In 2007, Dialog Axiata, a prominent mobile company in Sri Lanka started offering a mobile money service called eZ Pay. The service was offered in association with the National Development Bank and required customers to have a bank account and go through a detailed

<sup>8</sup> Stewart, C., Chan, I. et al, *Payments Policy Department, Reserve Bank of Australia*, 'The Evolution of Payment Costs in Australia', December 2014, p. 39, <https://www.rba.gov.au/publications/rdp/2014/pdf/rdp2014-14.pdf>

<sup>9</sup> <http://www.livemint.com/Industry/NVBQTnefQ6DoKeJ0rO0iyI/UPI-transactions-at-banks-not-up-to-the-mark-Economic-Surve.html>



verification process. Till 2012, eZ Pay was reported to have registered only 15,000 users. In 2012, Dialog got a license to offer its own mobile money services (called eZ Cash). Rules were now relaxed and the requirement of having a bank account was removed. KYC norms were also simplified and the company could now simply use the KYC information collected at the time of SIM registration. Customers could also open and operate a classic account (with a limit of Rs. 10,000) by simply dialling a number from their mobile phone. Within a year, the company had 8,10,000 users of eZ Cash with 2,00,000 active users on a 30 day basis.<sup>10</sup>

This, and several other examples, show that difficult KYC requirements act as a hindrance to adoption. Often people simply opt out of payments and banking solutions if they find the requirements burdensome.<sup>11</sup>

Recognizing the problem, RBI has already allowed for tiered KYC solutions in India. OTP based eKYC and other simplified procedures allow individuals to quickly share information with solution providers, or open accounts in the absence of all required documents. However, the range of services available through these methods is narrower than full KYC and come with restrictions on account holdings, withdrawal/transfer limits and time limits before which full KYC must be initiated.<sup>12,13</sup> Wallets are also allowed to create accounts for users without KYC, with caps on monthly spending.<sup>14</sup>

However, in the case of merchants, who are either registered as proprietorships or as companies/partnership firms, the list of documents required is much longer – including registration certificates/documents of incorporation etc.<sup>15</sup> This makes the process a lot more cumbersome.

The current on-boarding process for merchants is time-consuming and usually takes around six-seven days.<sup>16</sup> The Watal Committee Report also acknowledges that the inability of smaller merchants to provide required documents like tax returns and proof of business activity

<sup>10</sup> GSMA, 'Mobile money for the unbanked case studies', 2013, p.45, [https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/02/2013\\_MMU\\_Compendium-of-case-studies.pdf](https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/02/2013_MMU_Compendium-of-case-studies.pdf)

<sup>11</sup> ITU-T Focus Group on Digital Financial Services, *International Telecommunication Union*, 'B2B and the DFS Ecosystem', November 2016, p.16, [https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/10\\_2016/ITUFGDFS\\_REPORT%20ON%20B2BandDFSEcosystem-11-2016.pdf](https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/10_2016/ITUFGDFS_REPORT%20ON%20B2BandDFSEcosystem-11-2016.pdf)

<sup>12</sup> Master Direction- Know Your Customer Direction (Section 16, 24), *Reserve Bank of India*, December 2016, <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=10292&Mode=0>

<sup>13</sup> Rebello, J., *The Economic Times*, 'RBI allows eKYC to use OTP for account opening', December 2016, <http://economictimes.indiatimes.com/news/economy/policy/rbi-allows-ekyc-to-use-otp-for-account-opening/articleshow/55878472.cms>

<sup>14</sup> Paytm KYC Customer, *PayTM*, <https://paytm.com/care/wallet-upgrade-faqs/>

<sup>15</sup> Master Direction- Know Your Customer Direction (Section 28, 30 and 31), *Reserve Bank of India*, n.13

<sup>16</sup> Srivats, KS, *Business Line*, 'Digital payments: Need simpler KYC norms to attract smaller merchants, says Mastercard', December 2016, <http://www.thehindubusinessline.com/money-and-banking/digital-payments-need-simpler-kyc-norms-to-attract-smaller-merchants-says-mastercard/article9411972.ece>

discourages them from installing PoS machines and receiving payments digitally.<sup>17</sup> Small scale merchants are especially hard pressed for time and resources, and cumbersome requirements can prevent these merchants from adopting digital payments solutions.

Unlike the securities market in India which allows for a one-time KYC that can be used across intermediaries and products, a consolidated KYC option does not exist in banking/payments space. This means that every bank account that is opened or payments service that is availed needs separate KYC compliance.

### Lack of Interoperability

According to ITU's 2016 report, purchasing different devices to service different payment options and learning different payment procedures is a major hindrance to adoption by merchants.<sup>18</sup> The BCG- Google report also acknowledges that cash continues to be a predominant mode of payment mainly because 'existing systems do not fully address the needs of the customers due to lack of interoperability.'<sup>19</sup> The report notes that almost 70% of the 30 billion bills generated every year in India are paid in cash primarily because bill payment is not interoperable and digital service providers have to sign up with individual service providers.

During a short market survey conducted by the authors, one merchant categorically said, "I have a PoS machine and PayTM installed at my store. I have been saying no to all other payment service providers that have approached me because two solutions are already a lot to handle."

### Fraud/Fear of losing money

Trust is another major factor which comes into play during cashless transactions. Micro and small merchants, as do low income consumers, have very little appetite for financial risk. Fear of losing money due to chargebacks on merchants for fraud or disputed transactions, or the lack of effective grievance redressal mechanisms can significantly affect acceptance of digital payments solutions.<sup>20</sup> Poor or non-existent recourse in digital financial services is also likely to disproportionately affect women because of their 'lesser mobility and limited technological and financial literacy.'<sup>21</sup>

As per a World Bank-World Economic Forum (WB-WEF) report, one merchant, a seasoned businesswoman of many years in Indonesia, refuses to use any payment mechanism other than

<sup>17</sup> Committee on Digital Payments, *Ministry of Finance, Government of India*, 'Medium Term Recommendations to Strengthen Digital Payment Ecosystem', December 2016, p.116, [http://mof.gov.in/reports/watal\\_report271216.pdf](http://mof.gov.in/reports/watal_report271216.pdf)

<sup>18</sup> *International Telecommunication Union*, 'Enabling Merchant Payments Acceptance in the Digital Financial Ecosystems', p.5, n.7

<sup>19</sup> *Boston Consulting Group and Google*, 'Digital Payments 2020', p.13, n.1

<sup>20</sup> *Dalberg and Visa*, 'Small Merchants, Big Opportunities – The Forgotten Path to Financial Inclusion', p.23, n.9

<sup>21</sup> *Global Partnership for Financial Inclusion*, 'Digital Financial Solutions To Advance Women's Economic Participation', November 2015, p.12, <http://www.gpfi.org/publications/digital-financial-solutions-advance-womens-economic-participation>

cash after she was wrongly debited (twice) through her card.<sup>22</sup> An Accenture survey of young consumers also found that flawless execution of digital payments is considered absolutely crucial; a solution is often labelled as failed if there is need to contact the customer service.<sup>23</sup>

### Lack of customer demand

According to a Confederation of Indian Industry (CII) - Deloitte India survey conducted post demonetization, 67% of the merchants who accepted digital payments said that they did so because of customer demand.<sup>24</sup> But as cash has come back into the economy, both the value and volume of digital transactions has decreased substantially from the peak recorded post demonetization.<sup>25</sup>

A needs-assessment conducted by *Catalyst*, a USAID and GOI initiative, and IFMR Lead in Jaipur also re-affirms this observation.<sup>26</sup> Low customer demand is cited as one of the top three reasons why merchants do not feel a need to go digital.

### High pricing (for cards) and lack of transparency

Retail is a ‘high volume – low margin’ business<sup>27</sup> and any cost that has to be internalized by the merchant can significantly impact his or her profitability. Digital payments solutions such as cards (debit, credit and pre-paid) entail upfront onboarding/ installation costs as well as maintenance and transaction charges.

#### A) Upfront investments

A study by VISA published in October 2016 highlighted that the cost of a PoS terminal in India ranged between INR 8,000 and INR 12,000, with countervailing duties and taxes forming as much as 20% of this cost. The annual operating cost, including paper and servicing, usually ranged between INR 3000 and INR 4000.<sup>28</sup>

<sup>22</sup> World Bank Group, ‘Innovation in electronic payment adoption: the case of small retailers’, p.15, n.6

<sup>23</sup> Accenture Payment Services, *Accenture*, ‘Influencing Behaviours to Succeed in Everyday Digital Payments’, June 2016, p.9, [https://www.accenture.com/t20160602T024244\\_w\\_/gb-en/\\_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Local/en-gb/PDF\\_3/Accenture-Influencing-Behaviours-Everyday-Digital-Payments.pdf](https://www.accenture.com/t20160602T024244_w_/gb-en/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Local/en-gb/PDF_3/Accenture-Influencing-Behaviours-Everyday-Digital-Payments.pdf)

<sup>24</sup> BTVi, ‘56% Merchants Still Do Not Accept Digital Payments: Survey’, February 2017, [http://www.btv.in/btvi\\_newlook/article/read/news/10636/CII-signs-MoU-with-Singapore-trade-and-business-agencies](http://www.btv.in/btvi_newlook/article/read/news/10636/CII-signs-MoU-with-Singapore-trade-and-business-agencies)

<sup>25</sup> Macroeconomic Impact of Demonetisation- A Preliminary Assessment, *Reserve Bank of India*, March 2017, <https://rbi.org.in/Scripts/PublicationsView.aspx?id=17447#AND>; Waghmare, A., *Hindustan Times*, ‘Threat to cashless economy? After demonetisation push, digital transactions recede’, March 2017, <http://www.hindustantimes.com/india-news/digital-india-threatened-after-demonetisation-push-digital-transactions-recede/story-CpMaY0kcYoGLVreLhIYVHN.html>

<sup>26</sup> *Catalyst*, ‘Decoding Jaipur’s Digital Payments Landscape’, May 2017, <https://cashlesscatalyst.org/jaipur-posts/decoding-jaipur-digital-payments-landscape/>

<sup>27</sup> World Bank Group, ‘Innovation in electronic payment adoption: the case of small retailers’, p.13, n.6

<sup>28</sup> VISA, ‘Accelerating The Growth of Digital Payments in India: A Five-Year Outlook’, October 2016, p.7, [http://www.visa.co.in/aboutvisa/research/include/Digital\\_Payments\\_India.pdf](http://www.visa.co.in/aboutvisa/research/include/Digital_Payments_India.pdf)

Mobile PoS solutions are definitely cheaper and better alternatives to the traditional PoS machines. Following the success of mPoS solution provider Square in the US, it is widely estimated that mPoS solutions will quickly replace a large section of the existing PoS network.<sup>29</sup> Though cheaper, mPoS solutions still involve an upfront investment of INR 3,000-4,000 and annual operating costs of INR 3,000-4,000, and are seen as expensive by many small merchants.

Unlike cards, other digital payment solutions, such as wallets and UPI do not entail installation and maintenance charges and are definitely preferred solutions. However, in the case of wallets, restrictions such as limits on bank transfers and interoperability reduce usability for merchants.

### **B) Transaction charges**

Transaction charges (or MDR – Merchant Discount Rate) for cards is quite high, and often a sore point for merchants. For debit cards, RBI has capped MDR to a low level of 0.25% for smaller transactions (under Rs. 1000) and 1% for transactions (above Rs. 2000). MDR for credit cards is not fixed or mandated by RBI and usually ranges between 1.5 and 2%. Given the high transaction charges, cards become especially problematic for B2B players that operate on even lower margins.

Again, wallets and UPI score higher on this dimension – transaction charges in both cases are zero/minimal. But, none of these instruments meet the requirements of consumers who want to buy things on credit.

### **C) Lack of transparency**

Lack of transparency in pricing and terms of usage is also a barrier to adoption. Fieldwork undertaken in Jaipur by *Catalyst* suggests that mistrust towards payment solution providers prevents merchants from going digital. This is also compounded by the complexity of the terms of service and nuances in pricing arrangements. Merchants emphasize the need for solution providers to list terms and conditions in clear, easy to understand language.<sup>30</sup>

When CGAP surveyed consumers who use bill pay services through mobile money in Kenya and Tanzania, they found that 35% of users thought the service was free, when they were actually being charged for it.<sup>31</sup> Such negative experiences resulting from lack of transparency (or miscommunication) can reduce trust and prevent users from using digital payments solutions.

<sup>29</sup> Gupta, G. & Totapally, S., *CGAP*, ‘Transforming Payments through mPOS: Perspectives from Indonesia’, July 2014, <http://www.cgap.org/blog/transforming-payments-through-mpos-perspectives-indonesia>

<sup>30</sup> *Catalyst*, ‘Study to test the efficacy of incentive schemes for on boarding merchants and consumers’, April 2017, <http://cashlesscatalyst.org/wp-content/uploads/2017/04/Catalyst-Niti-Ayog.pdf>

<sup>31</sup> McKee, K., Kaffenberger, M. et al, *CGAP*, ‘Doing Digital Finance Right: The Case for Stronger Mitigation of Customer Risks’, June 2015, p.11, <https://www.cgap.org/sites/default/files/Focus-Note-Doing-Digital-Finance-Right-Jun-2015.pdf>

## Fears of increased tax liability

It is often argued that fears of increased tax liability act as a barrier to the adoption of digital payments; merchants avoid going digital because they worry that acceptance of digital payments will make their sales more transparent, thereby leading to an increase in tax liability.

Post demonetization, the Central Board of Direct Taxes (CBDT) had specifically issued a circular to allay fears of tax “terror”. CBDT's circular categorically stated that: "Mere increase in turnover, because of use of digital means of payment or otherwise, in a particular year cannot be a `sole' reason to believe that income has escaped assessment in earlier years. Hence, I-T officers are advised not to reopen past assessments in cases, merely on the ground that the current year's turnover has increased."<sup>32</sup>

While this line of thinking is logical, a short market research conducted by our team, seems to indicate otherwise. We conducted interviews with a few small merchants in Delhi to understand their modus operandi. We also spoke with Chartered Accountants (CAs) who help small merchants prepare their tax returns. From our interviews, it appears that most small merchants are not overwhelmingly concerned about increased tax liabilities or scrutiny. For one, they foresee only a fraction of their sales going digital; the rest is still expected to be in cash, thereby leaving enough room for financial manoeuvring to maintain sales disclosures at the same levels as earlier. Even if disclosed sales were to increase, the CAs we spoke with suggested that additional expense bills could easily be generated to maintain tax liability at the same levels as before.

While our market research was a short dip-stick survey, a detailed study can be undertaken to understand the mechanics of taxation and its impact on digitization in more detail.

## Higher cost of goods and services (as taxes are passed on to consumers)

Many small merchants in India pass on sales and service taxes to consumers if they ask for an invoice. If a consumer chooses to pay digitally, he or she is also expected to bear the additional tax burden. This can be a significant barrier to adoption.

Apparently, this problem is prevalent even in developed countries. A survey in Canada indicates that most Canadians would pay cash to avoid sales tax: “the survey for H&R Block Canada found 55 per cent of respondents saying that when dealing with a contractor, they would opt to

<sup>32</sup> *Times of India*, ‘CBDT allays tax fears as business shifts to digital’, December 2016, <http://timesofindia.indiatimes.com/companies/cbdt-allays-tax-fears-as-business-shifts-to-digital/articleshow/55952766.cms>

pay cash to avoid sales taxes.”<sup>33</sup> Therefore, high indirect taxes disincentivize digital payments and contribute to the development of the cash economy.

### Lack of acceptance across the supply chain

Merchants in developing countries often cite the ‘requirement to pay the supplier in cash’ as one of the biggest reasons why they resist adopting digital payments. Estimates indicate that in Sub-Saharan Africa, Latin America and South Asia, only 31%, 45% and 26%, respectively, of the total volume of payments by retailers are made electronically, as compared to the 81% level in high-income countries of the OECD. For retailers to be effectively integrated in the digital payments chain, they need to be able to receive electronically and even pay electronically.<sup>34</sup>

But, an ITU report also highlights that merchants may not be keen to pay digitally even if the supply chain were digitized. Digital payments, by their very nature, move funds quickly. This takes away the advantages of the traditional form of payment (cheque) that allow merchants to utilize funds as working capital in the time taken by a supplier to encash the cheque. In Kenya, many businesses were found to be issuing post-dated cheques, which would allow merchants additional working capital for a period of 60-90 days.<sup>35</sup>

<sup>33</sup> Beltrame, J., *thestar.com*, ‘Most would pay cash to avoid sales tax’, September 2012, [https://www.thestar.com/business/personal\\_finance/spending\\_saving/2012/09/19/most\\_would\\_pay\\_cash\\_to\\_avoid\\_sales\\_tax.html](https://www.thestar.com/business/personal_finance/spending_saving/2012/09/19/most_would_pay_cash_to_avoid_sales_tax.html)

<sup>34</sup> *World Bank Group*, ‘Innovation in electronic payment adoption: the case of small retailers’, p.8, n.6

<sup>35</sup> *International Telecommunication Union*, ‘B2B and the DFS Ecosystem’, p.16, n.12

*Potential levers to  
address the barriers*



## Potential levers to address the barriers

The previous section highlighted the numerous barriers faced by consumers and merchants in the adoption of digital payments. While barriers related to smartphone penetration and internet connectivity will only get resolved in due course of time (as the market develops and these products and services become more affordable), other barriers such as resistance to adoption of new products, interoperability, pricing etc. can be directly addressed through policy measures – regulatory amendments and/or changes in incentives – to induce greater uptake of digital payments solutions.

The first step to greater uptake is of course awareness, which needs systematic campaigns and easy availability of information. Players in the private sector are doing their bit by increasing awareness related to their own products and services. The government has undertaken measures to educate people about digital payments in general and to acquaint them with the different solution types available in the market. However, a lot more still remains to be done. In the needs assessment conducted by *Catalyst* in Jaipur, lack of awareness was still identified as one of the top barriers to adoption<sup>36</sup>, despite the extensive campaigns run by the government (and the private sector) during demonetization.

This section presents findings from our research and lays out global best practices to address the barriers identified in the previous section.

### Decreasing resistance to experimenting with (and adopting) new payments solutions

A survey of the existing literature suggests that there are two main ways in which people can be nudged to experiment with new payments solutions: (1) Making adoption and usage easier; and (2) incentivizing referrals.

#### *A) Making adoption and usage easier: Riding on an existing service/experience*

Consider the case of M-Pesa. Before the service was launched in Africa, people routinely made P2P transfers by sending airtime to each other.<sup>37</sup> As a result, there already existed an extensive network of agents selling and buying airtime in many African countries like Tanzania. Though it was more expensive to convert airtime to cash, transferring airtime was a tangible option. When M-Pesa was announced, Vodacom and Safaricom decided to use their existing network to act as Cash-In Cash-Out (CICO) agents. These agents helped in registering users to the service and in educating them. Since SIM owners had already complied with basic KYC requirements, no

<sup>36</sup> *Catalyst*, ‘Decoding Jaipur’s Digital Payments Landscape’, May 2017, <https://cashlesscatalyst.org/jaipur-posts/decoding-jaipur-digital-payments-landscape/>

<sup>37</sup> Mobile Money for the Unbanked, *GSMA*, ‘What Makes a Successful Mobile Money Implementation? Learnings from M-PESA in Kenya and Tanzania’, 2012, p.2, <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2012/03/What-makes-a-successful-mobile-money-implementation.pdf>



further KYC was required to be done for M-Pesa accounts, and when customers came to purchase new SIMs, they were encouraged to register for M-Pesa accounts as a Value Added Service (VAS), with the same amount of effort.

It is argued that the regulatory landscape in India has not supported such a transition for Indian consumers. Current RBI guidelines distinguish between different kinds of Pre-paid Payment Instruments (PPI) – open, semi-closed and closed, as well as mobile based and non-mobile based.<sup>38</sup> An open PPI is one which can be used for purchasing goods and services at PoS terminals and/or for withdrawing cash at ATMs. The most common examples of open PPIs are debit and credit cards. RBI guidelines allow eligible banks to issue all kinds of PPIs (banks permitted to provide mobile banking services can provide mobile based PPIs), but NBFCs are not allowed to provide open PPIs, whether mobile based or otherwise. Essentially this means that an NBFC will either have to create a banking entity to provide open PPIs (as in the case of the newly permitted payments banks) or will have to partner with an existing bank. Therefore, to launch M-Pesa in India, which is essentially an open PPI - a P2P fund transfer service which allows for CICO functions - Vodafone had to partner with HDFC and ICICI Bank.

Given the existing regulatory constraints, users who want to avail M-Pesa like P2P services in the Indian context are then forced to undertake the burdensome process of submitting additional documents.<sup>39</sup> In a research on Mobile Money Schemes across developing countries, it was found that the schemes floundered in certain countries because the regulatory regime insisted that banks play a lead role in launching the schemes, and comply with regular KYC and agent restrictions.<sup>40</sup> In comparison, countries with enabling regulatory regimes such as Kenya and Tanzania witnessed a ‘dramatic expansion’ in transaction and/ or CICO outlets. In Kenya, for instance, the number of M-Pesa outlets grew to outnumber bank branches, ATMs and Kenya Post branches.<sup>41</sup>

A report on mobile money services published by GSMA in 2016 also claims that services launched by Mobile Network Operators (MNOs) have seen much higher and faster uptake than non MNOs (see figure below).<sup>42</sup>

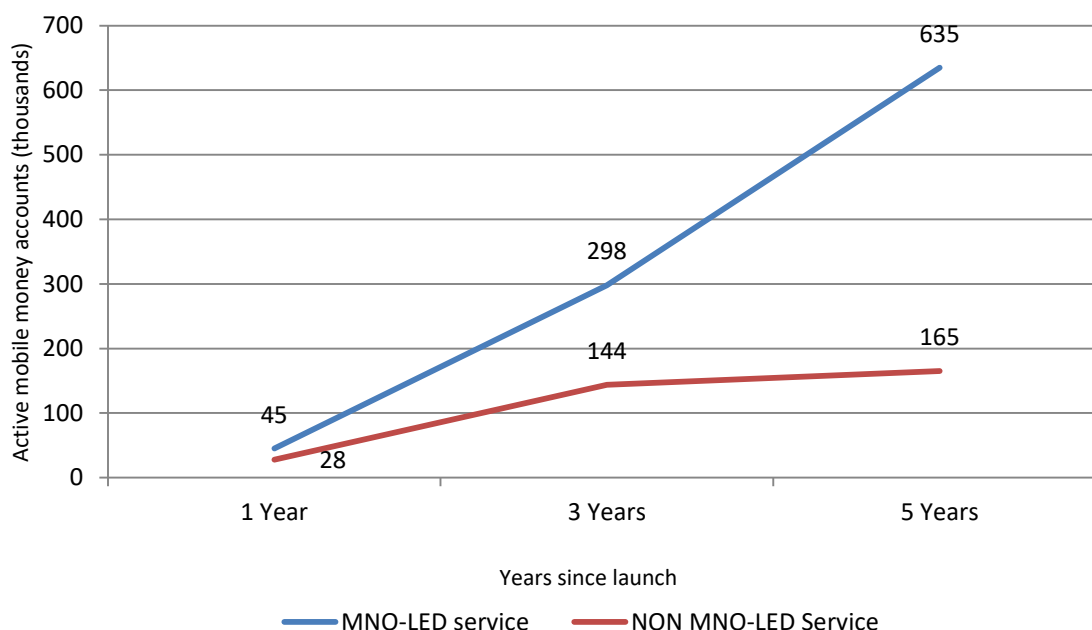
<sup>38</sup> Master Circular – Policy Guidelines on Issuance and Operation of Pre-paid Payment Instruments in India, *Reserve Bank of India*, December 2014, <https://rbi.org.in/scripts/NotificationUser.aspx?Id=8993&Mode=0#C>

<sup>39</sup> Documents Required for mpesa, *ICICI Bank*, [https://www.icicibank.com/mobile-banking/mpesa/documents\\_required.page?#toptitle](https://www.icicibank.com/mobile-banking/mpesa/documents_required.page?#toptitle)

<sup>40</sup> Evans, D. & Pirchio, A., *University of Chicago Law School Chicago Unbound*, ‘An Empirical Examination of Why Mobile Money Schemes Ignite in Some Developing Countries But Flounder in Most’, 2015, p.17, [http://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=2413&context=law\\_and\\_economics](http://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=2413&context=law_and_economics)

<sup>41</sup> Radcliffe, D. & Voorhies, R., ‘A Digital Pathway to Financial Inclusion’, p.11, n.5

<sup>42</sup> Mobile Money, *GSMA*, ‘Success factors for mobile money services: A quantitative assessment of success factors’, November 2016, p.7, <http://www.gsma.com/mobilefordevelopment/programme/mobile-money/success-factors-for-mobile-money-services-a-quantitative-assessment-of-success-factors>



*Figure 2: Difference in the uptake of mobile money services led by MNOs and non-MNOs<sup>42</sup>*

Available evidence does present a strong case for developing a regulatory landscape which permits innovative solutions in the field of e-money by non-bank entities.<sup>43</sup> Non-bank entities, especially MNOs are much better suited to providing CICO services than traditional banks because they are more experienced in ‘building and managing large, low-cost distribution networks in unserved areas’.<sup>44</sup> Recommendations have also been submitted to the RBI to allow third party agents to perform cash out operations with reasonable transaction limits, enable mobile money providers to pay interest on value stored in e-wallets and facilitate wallet to wallet interoperability.<sup>45</sup>

Allowing non-bank entities to deal in payments does entail additional risk, but it can be argued that a regulatory regime which promotes risk management practices rather than complete prohibition needs to be explored.<sup>46</sup> Radcliffe and Voohries also argue that services where only basic accounts and payments services are offered without ‘intermediating’ the collected funds, should not require full-fledged prudential requirements of traditional banks.<sup>47</sup>

<sup>43</sup> World Bank Group, ‘Innovation in electronic payment adoption: the case of small retailers’, p.13, n.6

<sup>44</sup> Castri, S., Mobile Money for the Unbanked, GSMA, ‘Mobile Money: Enabling regulatory solutions’, February 2013, p.3, [http://www.gsma.com/publicpolicy/wp-content/uploads/2013/02/GSMA2013\\_Report\\_Mobile-Money-EnablingRegulatorySolutions.pdf](http://www.gsma.com/publicpolicy/wp-content/uploads/2013/02/GSMA2013_Report_Mobile-Money-EnablingRegulatorySolutions.pdf)

<sup>45</sup> MMAI and GSMA Submission to RBI, ‘Mobile Money: Opportunity for India’, November 2013, p.2, [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/12/MMAI-GSMA-on-Mobile-Money-in-India-for-RBI-Financial-Inclusion-Committee\\_Dec13.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/12/MMAI-GSMA-on-Mobile-Money-in-India-for-RBI-Financial-Inclusion-Committee_Dec13.pdf)

<sup>46</sup> Committee on Payments and Market Infrastructures, World Bank Group, ‘Guiding Principles from Payment Aspects for Financial Inclusion’, April 2016, p.24, <http://www.bis.org/cpmi/publ/d144.pdf>

<sup>47</sup> Radcliffe, D. and Voohries, R., ‘A Digital Pathway to Financial Inclusion’, p.11, n.5

It would also be important here to draw a distinction between risk posed to an economy as opposed to risk posed to an individual consumer. In most cases, such payments services represent a large number of people making small transactions. Therefore, they do not pose any substantial economy wide financial risk. In 2010 in Kenya, M-Pesa transactions accounted for 70% of all electronic transactions in the country and yet they added up to just 2.3% of the total value of transactions. The accumulated balance of all M-Pesa accounts was just 0.2% of bank deposits by value.<sup>48</sup>

In terms of the usage of mobile money schemes, it has been found that P2P transfers and Over the Counter (OTC) services emerge as the most dominant use case; bill pay and retail payments not so much. Therefore, funds usually do not remain digital for very long. A study on M-Pesa conducted in 2013 found that 60-80% of the funds were cashed out just after one transfer.<sup>49</sup> This trend might change as more and more services are offered through mobile money schemes. In a 'State of the Industry Report,' GSMA found that while P2P transfers and air time top-ups continue to be the main use of these schemes, international remittances, bill and retail payments and bulk disbursements like government transfers quadrupled between 2013 and 2016.<sup>50</sup>

Reducing the regulatory requirement is also likely to bring additional benefits to low income consumers, especially with regard to consumption smoothing. It is telling that M-Pesa users in Kenya seem to have withstood large income shocks without any substantial reduction in household consumption because M-Pesa allowed them access to a number of senders from distant locations, even though the quantum of transfers was relatively small.<sup>51</sup>

### ***B) Making adoption easier: Simplified KYC requirements***

Two new developments are worth mentioning. One, RBI has issued directions for consolidating all KYC documents to a central registry which will ensure that once KYC has been completed for one financial product such as a bank account, it can be used for others.<sup>52</sup> This is going to bring great relief, to both consumers and merchants.

Second, the draft master guidelines issued by RBI in March 2017 require all PPI accounts, including those with a limit of up to Rs. 20,000 (which were initially set up under minimal KYC norms) to be converted into full KYC compliant accounts.<sup>53</sup> These guidelines also allow for

<sup>48</sup> Mobile Money for the Unbanked GSMA, 'Mobile Money: Enabling regulatory solutions', p.8, n.42

<sup>49</sup> Pablo García A., CGAP, 'M-Pesa Usage Data: OTC Makes Sense, Even for Kenya', September 2013, <http://www.cgap.org/blog/m-pesa-usage-data-otc-makes-sense-even-kenya>

<sup>50</sup> GSMA, 'State of the Industry Report on Mobile Money, Decade Edition: 2006 – 2016', 2017, p.5, [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/03/GSMA\\_Executive\\_Summary\\_State-of-the-Industry-Report-on-Mobile-Money-2016.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/03/GSMA_Executive_Summary_State-of-the-Industry-Report-on-Mobile-Money-2016.pdf)

<sup>51</sup> Radcliffe, D. & Voorhies, R., 'A Digital Pathway to Financial Inclusion', p.6, n.5

<sup>52</sup> *Times of India*, 'Submit KYC documents just once for all account opening', July 2016, <http://economictimes.indiatimes.com/wealth/personal-finance-news/submit-kyc-documents-just-once-for-all-account-opening/articleshow/53204925.cms>

<sup>53</sup> Master Directions on Issuance and Operation of Prepaid Payment Instruments in India, *Reserve Bank of India*, March 2017, [https://rbi.org.in/scripts/Bs\\_viewcontent.aspx?Id=3325](https://rbi.org.in/scripts/Bs_viewcontent.aspx?Id=3325)

interoperability of PPIs. The non-banking companies operating PPIs and even companies which have received licenses to operate payments banks have expressed reservations about these guidelines. They worry that these guidelines will increase administrative workload and drive up customer acquisition costs.<sup>54</sup> The increased requirements are also likely to discourage small ticket transactions initiated by migrant and excluded populations.<sup>55</sup>

On the merchant side, there is no relief: KYC requirements (and by extension on-boarding procedures) are likely to continue to remain cumbersome for the foreseeable future.

While certainly, there are many arguments in favour of strong KYC disclosures, it is important to keep KYC norms minimal (and paperless) to attract low-income users. Therefore, the regulator must actively explore options to make compliance easier.

### *C) Incentivizing referrals*

Referral schemes have been used successfully across industries and product types to drive adoption of new services.<sup>56</sup> Dropbox followed a simple referral scheme in which it offered both the sender and the receiver 500 MB free space. While the entire increase in user base may not be attributable to the referral scheme, it is interesting to note that within a span of 15 months, the company's total user base increased from 100,000 users in 2008, to 4 million. AirBnB used a similar double referral scheme wherein it credited both the referee and the referred with \$25 when the referred user completed his or her first trip. If the referred user hosted a guest, an additional \$75 was offered. UBER's referral scheme for drivers is also known to be quite successful. Similar models have been used PayTM to drive up its user base.

In the context of financial services, it is now well recognized that referrals and peer to peer support help people overcome behavioural biases. In fact, microfinance institutions routinely train community members to become staff and promote financial services in their community.<sup>57</sup> Market research by Nielsen has also found that as many as 92% customers rely on recommendations from friends and family over all forms of advertising.<sup>58</sup>

<sup>54</sup> Agarwal, S., *The Economic Times*, 'KYC norms maybe a major impediment for payment banks', August 2016, <http://economictimes.indiatimes.com/small-biz/money/kyc-norms-maybe-a-major-impediment-for-payment-banks/articleshow/53765322.cms>

<sup>55</sup> Variyar, M., *The Economic Times*, 'New RBI plan could bring bad news for m-wallets like Paytm and Mobikwik', April 2017, <http://economictimes.indiatimes.com/industry/banking/finance/banking/proposed-rbi-norms-worry-mobile-wallets/articleshow/58212639.cms>

<sup>56</sup> Duct Tape Marketing, 'How Top Apps Are Leveraging Referral Marketing to Boost Downloads', <https://www.ducttapemarketing.com/leveraging-referral-marketing/>

<sup>57</sup> Arnold, J. and Rhyne, E., *Centre for Financial Inclusion and Accion*, 'A Change in Behaviour: Innovations in Financial Capability', April 2016, p.14, <http://www.centerforfinancialinclusion.org/fi2020/roadmap-to-inclusion/innovations-in-financial-capability>

<sup>58</sup> Whitler, K., *Forbes*, 'Why word of mouth marketing is the most important social media?', April 2017, <https://www.forbes.com/sites/kimberlywhitler/2014/07/17/why-word-of-mouth-marketing-is-the-most-important-social-media/#75fff4c954a8>

But referral programs must be designed carefully to have the desired effect. Not only can well designed referral schemes help quickly onboard a wide subscriber base, they can also be very cost effective. In particular, the following should be kept in mind:

- A research conducted on ‘Freemium’ models of businesses (free basic services that can be topped up with paid premium services) found that consumer response to a referral program follows an inverted-U curve suggesting that firms should neither offer too small an incentive (customers may not find it worth their time), nor should they offer too large an incentive (may reduce a customer’s motivation to send out a large number of referral invites).<sup>59</sup> The optimal size of the incentive that maximizes the referral rate should be determined through experimentation in each context and should take into account the consumer’s value to the company, including the positive externality that accrues from the additional person joining the network.
- As per a McKinsey study, an average customer needs about 10-15 minutes of face-time with a representative to get comfortable using a digital payments product.<sup>60</sup> If the reward is contingent on the receiver making transactions, the referral program must take into account the additional effort needed to be put in by the sender. At the minimum, the reward should be adequate to compensate the sender for his or her efforts.
- A common practice in referral programs is to give rewards only to the sender of the referral. While this is aimed at minimizing costs, it can also decrease the overall effectiveness of the program. Research shows that people are wary of being seen as profiting off their personal networks.<sup>61</sup> This is especially true for casual/weak ties where the sender and the receiver don’t know each other very well. In such relationships, “equity” concerns are expected to dominate the relationship.<sup>62</sup> If both parties get rewarded, the program puts them on a level playing field and increases participation and overall conversion rates. A case in point is the Uber referral program in India which gives both the sender and the receiver rides worth Rs. 150, per successful referral.
- Rewards are especially important for increasing referrals to weak ties. Since customers will most likely refer a program to family and close friends first, companies can consider a tiered referral structure that increases the reward size as the number of referrals increases. This will help incentivize referrals to acquaintances and widen overall reach.

<sup>59</sup> Lee, C., Kumar, V. et al, *Harvard Business School*, ‘Designing Freemium: a Model of Consumer Usage, Upgrade, and Referral Dynamics’, September 2013, p.6,

[http://164.67.163.139/Documents/areas/fac/marketing/DesigningFreemium\\_ClarenceLee\\_2013.pdf](http://164.67.163.139/Documents/areas/fac/marketing/DesigningFreemium_ClarenceLee_2013.pdf)

<sup>60</sup> McKinsey, ‘Mobile Money: Getting to scale in emerging markets’, n.2

<sup>61</sup> Referral Marketing E-Book, p.23,

[http://www.pickdup.com/uploads/1/1/7/3/11734004/referral\\_marketing\\_ebook.pdf](http://www.pickdup.com/uploads/1/1/7/3/11734004/referral_marketing_ebook.pdf)

<sup>62</sup> Gangseog, R. & Feick, L., ‘A Penny for Your Thoughts: Referral Reward Programs and Referral Likelihood.’ *Journal of Marketing* 71, no. 1 (2007): pp. 84-94, <http://www.jstor.org/stable/30162131>

- The right time to convert a potential user is when he or she is going to make a decision. It will therefore help if merchants and customers can play an important role in nudging each other at the point of sale. Discounts and cashbacks at the point of sale can become important drivers of conversion.<sup>63</sup>
- Instant gratification is an important aspect as well. Rewards should accrue sooner than later, ideally as soon as the referral is made.<sup>64</sup>

## Improving stickiness and increasing usage

As highlighted in the first section, a key challenge with digital payments is customer stickiness and usage. Often only a fraction of the users who sign-up to a payments solution, actually end up using it. This pattern has also been observed in the case of the BHIM app: while BHIM was downloaded by over 19 million users in the first three months, only 5 million users linked it with their bank accounts<sup>65</sup>; the number of repeat users was much lower.

Making sure that the payments process is seamless and convenient is one potential way of addressing the challenge. A second way could involve designing solutions that embed themselves in high frequency and low value use cases. In the text that follows, we elaborate on these two options.

### A) Making the experience seamless and convenient

In addition to improving connectivity and regulating inter-bank transactions to minimize payment failures, options should be explored to reduce actual transaction time. Studies unequivocally suggest that longer processing times make digital payments less attractive – to both consumers and merchants.<sup>66</sup>

Faster payment solutions through contactless transactions, possibly without a PIN, have the potential to significantly decrease processing time. This is likely to prompt higher usage of digital payments in regular day-to-day small value transactions and increase customer stickiness.

### B) Embedding digital payments solutions in daily life chores

Customers often associate digital payments with large value transactions.<sup>67</sup> According to a study undertaken by Dalberg for VISA, several merchants reported that even customers who have

<sup>63</sup> Centre for Financial Inclusion and Accion, 'A Change in Behaviour: Innovations in Financial Capability', n.55

<sup>64</sup> Gains, B., *Referral Sasquatch*, 'Choosing Rewards for Your Referral Program', December 2014, <https://www.referralsasquatch.com/choosing-rewards-for-your-referral-program/>

<sup>65</sup> *Financial Express*, 'Setback for BHIM app, only 26% downloads translate into active usage: NPCI', March 2017, <http://www.financialexpress.com/industry/setback-for-bhim-app-only-26-downloads-translate-into-active-usage-npci/596161/>

<sup>66</sup> *Payments Policy Department, Reserve Bank of Australia*, 'The Evolution of Payment Costs in Australia', p.40, n.8

<sup>67</sup> USAID, 'Compendium of merchant and consumer quantitative survey insights', November, 2015, p.14, <https://static.globalinnovationexchange.org/s3fs->



cards, use them for large purchases only; cards are not seen as payments tool for everyday transactions by most customers.<sup>68</sup>

It can be argued that embedding digital payments solutions in people's everyday lives through low-value high-frequency transactions such as transit can make people more comfortable with digital payments and improve stickiness. Repeat usage can create strong self-service habits which can then be leveraged to push for adoption of digital solutions in other spheres. With increased usage, the 'sensitivity to elements of risk' also reduces.<sup>69</sup>

In this context, there have been many cases of successful transition of pre-paid instruments from transit to retail payments. The Watal Committee report profiles the case of T-Money in South Korea, which started as a pre-paid card to facilitate fare transfer during transit, but soon spread to parking garages, toll booths, fast food stores and movies. Customers even started using it for paying taxes and for other civic amenities.<sup>70</sup>

Another successful example is the Octopus card in Hong Kong, which started as a contactless card for public transportation.<sup>71</sup> The first non-transportation use of the Octopus card was paid-phones and photo booths at Mass Transit Railway Stations. The card soon came to be adopted by a number of different services – car parks, supermarkets, vending machines etc. After 5 years, 25% of transactions on the Octopus card were non-transit, with as many as 19,000 retail outlets accepting the card, witnessing as many as 14 million transactions a day valued at HK \$180 million.

Picking a context closer home, 65% of the Delhi Metro commuters use Smart Cards, showing a clear preference for cards.<sup>72</sup> The Delhi Metro has also launched a 'More Card' which can be used on the Metro and on certain DMRC feeder buses. It would be worthwhile to study the impact of this initiative and explore the potential of a common mobility card that may be used across public transportation options.

### Decreasing the direct and indirect costs of operation

As discussed in the previous section, operating a digital payments solution entails several costs – both direct and indirect. While direct costs include upfront investments in equipment/installation and transaction charges, indirect costs accrue through channels like taxation<sup>73</sup>, especially indirect

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public/asset/document/1.%20USAID%20India%20Digital%20Payments%20Quantitative%20Research%20Findings\_1.pdf?MRNJjETeewvi3m9sjZA2lzH0xGjAMluc

<sup>68</sup> Dalberg and Visa, 'Small Merchants Big Opportunity: The Forgotten Path to Financial Inclusion', p.9, n.9

<sup>69</sup> Accenture, 'Influencing Behaviours to Succeed in Everyday Digital Payments', p.7, n.24

<sup>70</sup> Ministry of Finance, Government of India, 'Medium Term Recommendations to Strengthen Digital Payment Ecosystem', p.121, n.18

<sup>71</sup> Smart Card Alliance, 'Contactless Payment and Retail Point of Sale: Applications, Technologies and Transaction Models', March 2003, pp.7-8, [https://www.securetechalliance.org/resources/lib/Contactless\\_Pmt\\_Report.pdf](https://www.securetechalliance.org/resources/lib/Contactless_Pmt_Report.pdf)

<sup>72</sup> DMRC, 'More Delhi- Common mobility card launched for Delhi metro and feeder buses', [http://www.delhimetrorail.com/whatnew\\_details.aspx?id=axxd290CIsUlld](http://www.delhimetrorail.com/whatnew_details.aspx?id=axxd290CIsUlld)

<sup>73</sup> As discussed in the previous section, direct taxation is not as big a concern for merchants

taxation - sales/service tax on items that are invoiced. If these costs are internalized by a merchant, they directly affect his or her profit. Therefore, in order to promote the adoption of digital payments, we must explore options to minimize these costs.

### ***A) Decreasing upfront investments through innovation and government support on imports***

Besides promoting solutions with lower upfront installation costs – such as UPI, the government should consider measures to decrease the costs of PoS and mPoS machines. Given the positive externalities of digital payments, even subsidies can be considered.

To be fair, the government has recently announced exemptions to basic customs duty, excise/ countervailing duty and special additional duty on miniaturised PoS card reader for m-PoS machines etc.<sup>74</sup> While this is a step in the right direction, overall costs still seem prohibitive. The scope of exemptions is also limited as traditional PoS machines have not been exempted. It is important to recognize that high import duties increase the cost of PoS machines and make it much harder for banks to acquire customers.<sup>75</sup>

A recent Dalberg study also highlights the need for lowering regulatory thresholds for new payments start-ups to encourage innovation for bringing down costs. This recommendation merits serious consideration.

### ***B) Re-rationalizing MDR and promoting newer low cost solutions***

Transaction charges in the form of the Merchant Discount Rate (MDR) are one of the major pain points for merchants. Most card payment transactions are processed through the so-called ‘four-corner model’ that includes the following four players: cardholder; merchant; issuing bank<sup>76</sup> (consumer’s card provider) and the acquirer (merchant’s payment handler)<sup>77</sup>.

MDR is charged to the merchant and split between the different players in the payments chain – namely the acquiring bank, the issuing bank and the card payments network. The biggest component of the MDR is the Multilateral Interchange Fee (MIF) i.e. the fee paid by the acquiring bank to the card issuing bank. MIF is established by the card network (Visa, MasterCard etc.) to ensure a sharing of costs among the players in the chain, and considers a host of factors including merchant category, time between authorization and clearing, swipe method etc.<sup>78</sup> A component of MDR is also paid to the card network as assessment fee, for providing payments services.

<sup>74</sup> Budget Speech of Finance Minister Sh. Arun Jaitley, p.32, <http://indiabudget.nic.in/ub2017-18/bs/bs.pdf>

<sup>75</sup> *Ministry of Finance, Government of India*, ‘Medium Term Recommendations to Strengthen Digital Payment Ecosystem’, p.116, n.18

<sup>76</sup> An issuing bank is a bank or financial institution that offers payments cards to consumers.

<sup>77</sup> An acquiring bank is a bank or financial institution that processes credit or debit card payments on behalf of a merchant.

<sup>78</sup> *Mastercard*, ‘Mastercard interchange rates and fees’, <https://www.mastercard.us/en-us/merchants/get-support/merchant-interchange-rates.html>, Downs, P., *New York Times*, ‘What You Need to Know About Credit Card



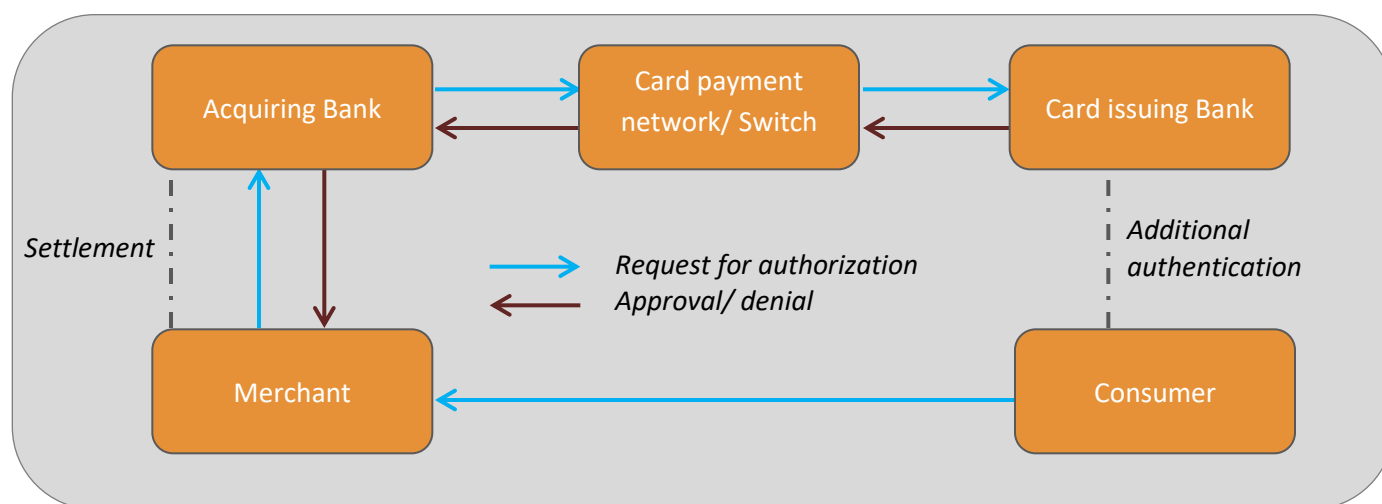


Figure 3: The four-corner model in card payment transactions

The card network also gets paid a fee by both the issuing and the acquiring banks. The quantum of this fee depends on the contractual agreements between the banks and the card network.<sup>79</sup>

While card networks maintain that they “do not receive any revenue” from MIF,<sup>80</sup> the fact that they are paid fees by both the acquiring and the issuing bank means that their revenues are intimately tied to the MIF. MIF directly impacts the economics of the transaction for the banks involved in the transaction and thus, their ability to pay the fees desired by the card networks.

MIF has been a controversial issue across jurisdictions, and the subject of several anti-trust lawsuits and regulatory action. Given network effects in the payments space, regulators worry that card networks misuse their market power to set unreasonably high MIF and profiteer at the expense of merchants and consumers. But, establishing market power, and determining a MIF level that is optimal is harder than it appears.<sup>81</sup> A sub-optimal MIF can distort the market and lead to misallocation of resources. If the MIF is too high, the acquirers will be unwilling to invest time and effort in onboarding merchants, and if MIF is too low, the issuers will not issue enough cards and/or might reduce rewards that incentivize consumers to spend digitally. In the case of credit cards, reduced profitability might also increase risk aversion and shrink credit availability.

Processing’, March 2013, [https://boss.blogs.nytimes.com/2013/03/25/what-you-need-to-know-about-credit-card-processing/?\\_r=0](https://boss.blogs.nytimes.com/2013/03/25/what-you-need-to-know-about-credit-card-processing/?_r=0)

<sup>79</sup> Dewina, M., Fiolet, J. et al, *Innopay*, ‘A €6 billion interchange cap, will there be a payment scheme as we know it?’, September 2015, <https://www.innopay.com/blog/a-6-billion-interchange-cap-will-there-be-a-payment-scheme-as-we-know-it/>

<sup>80</sup> *Mastercard*, ‘Interchange: Myths and Facts’, p.2, <https://www.mastercard.us/content/dam/mccom/en-us/documents/Myths-and-Facts.pdf>

<sup>81</sup> *United States Government Accountability Office*, ‘Rising Interchange Fees Have Increased Costs for Merchants, but Options for Reducing Fees Pose Challenges’, November 2009, p.13, <http://www.gao.gov/new.items/d1045.pdf>

Below, we recount experiences of regulating MIF in Australia, Europe and the US.

In 2003, the Reserve Bank of Australia (RBA) set limits on the MIF for Bankcard, Mastercard and VISA credit cards.<sup>82</sup> By capping interchange fees, RBA estimated that merchants saved about 1.1 billion AU\$ between March 2007 and February 2008, but how much of this decrease was passed to customers was unclear.<sup>81</sup> A study reported that merchants hesitated to lower prices because the decrease in costs was relatively small.<sup>83</sup> Following RBA's action, issuing banks suffered losses in revenues worth AU\$647m. But, these banks responded quickly by increasing the level of other fees charged to customers and recovered 74% of the lost revenue (AU\$480m) from increases in annual fees alone.<sup>84</sup>

In the backdrop of anti-trust investigations in Europe in 2007, the European Commission reached an agreement with MasterCard and Visa to reduce their cross-border MIF to 0.2% on debit card transactions and 0.3% on credit card transactions. These MIFs were determined on the basis of a methodology named the 'tourist test' or 'merchant indifference test', a test to determine the level at which a merchant is indifferent between cash and card. The fee that meets this test ensures that “merchants do not pay higher charges than the value of the transactional benefits that card use generates for them”.<sup>85,86</sup> Such a level also ensures that no negative externalities are introduced in the system.<sup>87</sup> In 2015, the European Commission extended the idea and implemented caps on MIF for both national and cross-border transactions.<sup>88</sup>

In 2010, the US Congress passed the Durbin amendment to the Dodd-Frank financial reform legislation empowering the Federal Reserve to limit debit card interchange fees. The Federal Reserve announced rates in 2011 and reduced the interchange fees from around 40 cents to 21 cents per transaction. This was higher than the 12 cents proposed in December 2010.<sup>89</sup> A study published in 2014 found that issuing banks were losing billions of dollars in interchange revenue, and yet the impact on merchants seemed limited (and unequal).<sup>90</sup>

<sup>82</sup> Reserve Bank of Australia, Media Release, 'Interchange Fees for the Bankcard, Mastercard and Visa Credit Card Schemes', October 2003, <http://www.rba.gov.au/media-releases/2003/mr-03-14.html>

<sup>83</sup> Chang, H., Evans, D. et al, *Review of Network Economics*, 'The Effect of Regulatory Intervention in Two-Sided Markets: An Assessment of Interchange-Fee Capping in Australia', 4(4), December 2005, pp.328-358

<sup>84</sup> Europe Economics, 'The Economic Impact of Interchange Fee Regulation', September 2014, p.28, [http://www.europe-economics.com/publications/economic\\_impact\\_of\\_if\\_regulation\\_-\\_uk.pdf](http://www.europe-economics.com/publications/economic_impact_of_if_regulation_-_uk.pdf)

<sup>85</sup> European Commission, Banking and Financial Services, [http://ec.europa.eu/competition/sectors/financial\\_services/enforcement\\_en.html](http://ec.europa.eu/competition/sectors/financial_services/enforcement_en.html)

<sup>86</sup> European Commission, Directorate General for Competition, 'Survey on merchants' costs of processing cash and card payments', March 2015, p.20, [http://ec.europa.eu/competition/sectors/financial\\_services/dgcomp\\_final\\_report\\_en.pdf](http://ec.europa.eu/competition/sectors/financial_services/dgcomp_final_report_en.pdf)

<sup>87</sup> Borestan, A. & Schmeidel, H., *European Central Bank*, 'Interchange Fees in Card Payment', September 2011, p.42, <https://www.ecb.europa.eu/pub/pdf/scpops/ecbocp131.pdf>

<sup>88</sup> Currencycloud, 'How Will EU Interchange Caps Affect the Industry?', February 2016, <https://www.currencycloud.com/news/blog/how-will-eu-interchange-caps-affect-the-industry/>

<sup>89</sup> NAPCP, 'Durbin Amendment: Debit Interchange Regulation and More', <http://www.napcp.org/page/DurbinAmendment>

<sup>90</sup> Wang, Z., Schwartz, S. et al, *Economic Quarterly*, 'The Impact of the Durbin

World over, card networks have vehemently opposed regulatory caps on MIF citing the need for maintaining viability in business and avoiding the race to the bottom that might eventually compromise innovation and security.

In India, MDR for debit cards is currently capped at 0.25% for smaller transactions (under Rs. 1000) and 1% for larger transactions (above Rs. 2000). Unlike the practice followed by the free market, the rate caps prescribed by RBI are the same across merchant categories. Currently, MDR for credit cards is not capped and usually ranges between 1.5 and 2%.

In fact, RBI had first rationalized the rates in 2012 by capping the MDR for debit card transactions at 0.75% for values upto Rs.2000/- and at 1% for transaction values above Rs.2000/-. However, as per RBI's own admission in its 2016 *Concept Paper on Card Payment Infrastructure*, capping the MDR did not lead to any substantial increase in debit card transactions.<sup>91</sup> In fact, there was a decrease in year-on-year deployment of PoS terminals. Acquirers and issuers blamed the low MDR for reducing the financial viability of the cards business.

The RBI concept paper recognizes that the high cost of acquiring merchants coupled with the low volume of transactions per PoS terminal are major inhibiting factors in the Indian context. Also, while most banks issue cards, very few are in the business of acquiring – top five banks hold 81% of the PoS infrastructure in India (Dec 2015).

Unlike in many other countries, in the Indian context there are also no rules barring merchants from “surcharging” or passing MDR charges to customers. This allows merchants the opportunity to steer away customers from high-cost solutions, and affords them greater leverage and bargaining power in negotiating MDR charges with acquiring banks or card networks. Also, given the prevalence of cash in the Indian economy, steering away is more easily done here than in other countries such as the US and Australia. **Therefore, card payment networks in India do not have as much market power as is sometimes assumed, and capping MDR is likely to prove counter-productive. Instead of boosting digital transactions, it may end up hindering the growth of the payments acceptance infrastructure.**

An interesting alternative that has been proposed in the 2016 RBI concept note is the creation of an Acceptance Development Fund (ADF). It is suggested that an ADF funded by card issuers be created to build a corpus for investing in initiatives to expand acceptance infrastructure in the country. This will help reduce the stress on margins and also shorten the investment recovery period for acquirers. ADFs have been used successfully in Poland and Indonesia. Even Malaysia has set up such a Market Development Fund to set up 800,000 new terminals by 2020. Given the

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Amendment on Merchants: A Survey Study', Volume 100, Number 3, Third Quarter 2014, pp.183-208  
[https://www.richmondfed.org/-/media/richmondfedorg/publications/research/economic\\_quarterly/2014/q3/pdf/wang.pdf](https://www.richmondfed.org/-/media/richmondfedorg/publications/research/economic_quarterly/2014/q3/pdf/wang.pdf)

<sup>91</sup> Concept Paper on Card Acceptance Infrastructure, *Reserve Bank of India*, March 2016,  
<https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=840>

positive externalities of digital payments (better tracking, taxation and financial inclusion), the government should also consider funding the growth of infrastructure (possibly through a direct contribution to the Acceptance Development Fund).

Promoting innovative solutions and helping them gain critical mass is the other option. Newer, non-card solutions are often more flexible and responsive to the needs and paying capacities of merchants. A WB-WEF report profiles the success of Lipa Na M-PESA by Safaricom in Kenya. The service charges a much smaller transaction fee of 1% as opposed to the 2-3% charged by traditional card companies. Thanks to its lower transaction charges, it has successfully roped in merchants across different service categories – supermarkets, hotels, gas stations, public transportation etc. In the Indian context, UPI is one such solution that demonstrates promise.

### *C) Increasing transparency in pricing*

Lack of transparency leads to distrust. Most consumers and merchants feel overwhelmed with the different products and services in the market and the differences in rates between them. The additional layers of incentives and exemptions also add to the confusion. A BCG study found that far from understanding the nuances in pricing, most merchants are unaware of the basics - they are not even aware of the difference in MDR rates between debit and credit cards.<sup>92</sup>

The need of the hour is to have solution providers clearly disclose, ‘using comparable methodologies’, the various service fee and other charges applicable, along with relevant terms and conditions and liability, in order to bring transparency and build trust in the service.<sup>93</sup>

### *D) Reducing the costs of indirect taxation*

As discussed under the barriers to adoption, many small merchants in India pass on sales and service taxes to consumers if they ask for an invoice. This means that if a consumer chooses to pay digitally, he or she is also expected to bear the additional tax burden. At the proposed rates of GST, the increase in prices resulting from this transfer can be significant (~18% for many goods and 28% for durable goods and luxury items).<sup>94</sup>

While there is undoubtedly temptation to retain indirect taxes as they are administratively easier to collect, it would do well to remember that high indirect taxes can become a significant deterrent to the adoption of digital payments. An 18% increase in price can be a very strong incentive to keep the transaction in cash. In fact, our team's market survey suggests that even the lower GST bracket of 5% is incentive enough; merchants report that consumers are reluctant to internalize even the smallest of price increases.

<sup>92</sup> *Boston Consulting Group and Google*, ‘Digital Payments 2020 – The making of a \$500 Billion ecosystem in India’, p.49, n.1

<sup>93</sup> *World Bank Group*, ‘Guiding Principles from Payment Aspects for Financial Inclusion’, p.54, n.44

<sup>94</sup> *Economic Times*, ‘A quick guide to India GST rates in 2017’, June 2017, <http://economictimes.indiatimes.com/news/economy/policy/a-quick-guide-to-india-gst-rates-in-2017/articleshow/58743715.cms>

Some may argue that with the shift to GST and its system of input-tax credits, tax avoidance in the Indian economy is likely to decrease in general and therefore the above may no longer be a valid concern. But, if the experience of VAT is anything to go by, we should temper our expectations. A study by the *Comptroller and Auditor General of India* suggests that VAT has not been as effective as anticipated; and tax evasion has continued to a large extent.<sup>95</sup> The government should therefore actively consider rationalizing indirect taxes, or subsidizing the tax on transactions done digitally.

### **Tilting the scale in the favour of digital payments by providing add-on benefits to merchants**

From a merchant's point of view, digital payments become attractive when they see a value add to their business. While awareness drives are likely to help, offering innovative add-on solutions that help boost profits may be the key to adoption. In this context, three options merit considered: (1) increased sales (through new lines of business or expanded customer base); (2) increased availability of credit on the basis on digital transaction history; and (3) value added services to help manage and grow the business.

#### **A) Increased sales (through new lines of business or expanded customer base)**

Merchants are willing to pay, to be paid.<sup>96</sup> If merchants can attract new customers or if they can increase their revenue from existing customers, they are more likely to adopt digital payments solutions.

A WB-WEF Report<sup>97</sup> profiles the case of Grupo Bimbo in Mexico City which offered merchants an electronic airtime and bill payment PoS solution to conduct transactions on behalf of their customers for earning extra income. This service was not available with the merchants traditionally, and merchants were more than happy to pay for it.

Studies have also indicated that merchants are often more accepting of solutions that result in immediate increases in income, rather than those that promise returns in the long run. A merchant survey conducted by the TQH team confirms this inclination. Therefore, payments solutions providers would do well to find new opportunities that can be leveraged by merchants in the short term. Use of digital payments for leveraging such opportunities can provide a stronger pitch for conversion.

<sup>95</sup> *Comptroller and Auditor General of India*, 'Implementation of Value Added Tax in India- Lessons for transition to Goods and Services Tax- A study report', June 2010, [http://www.cag.gov.in/sites/default/files/publication\\_files/SRA-value-added-tax.pdf](http://www.cag.gov.in/sites/default/files/publication_files/SRA-value-added-tax.pdf)

<sup>96</sup> *International Telecommunication Union*, 'Enabling Merchant Payments Acceptance in the Digital Financial Ecosystems', p.18, n.7

<sup>97</sup> *World Bank Group*, 'Innovation in electronic payment adoption: the case of small retailers', p.33, n.6

### ***B) Increased availability of credit on the basis of digital transaction history***

As per a 2010 estimate, 70% of the 445 million MSMEs in the developing world do not avail of finances from formal financial institutions.<sup>98</sup> The ‘information asymmetry’ that plagues the formal financial markets makes it difficult for lenders to advance credit to MSMEs as they have limited information about the enterprise’s ability to repay the loan.<sup>99</sup> Enterprise owners often have no income records, history of transactions or collateral to offer.

But, credit is an important need for business – whether in the form of working capital loans or credit for investment. If innovative solutions can be designed to overcome the information asymmetry between small businesses and financial markets, an important need can be met.

Alifinance, a subsidiary of Alibaba, uses a vendor’s online transaction data to make instant decisions on loans of amounts US\$3500-US\$5000. M-Shwari, operated by the Central Bank of Africa and Safaricom, uses M-Pesa data to advance credit. Between 2012 and 2015, it issued 21 million loans to 2.8 million unique borrowers. A San Francisco based company Branch also uses M-Pesa transaction history data in Nairobi and Kenya to issue smaller loans (average size: US\$30) within 10 minutes. Their default rate is under 5%.

In India, many companies such as Capital Float have adopted similar models. A Tracxn report also acknowledges that the alternative lending space in India is gradually being occupied, with as many as 30 start-ups operating in this space in 2015, up from 2 in 2013. These companies are using new data sources to augment traditional data to evaluate credit worthiness and enhance credit availability.

Digital payments can help small merchants tap this opportunity to access additional credit by making it easier to record (and share) verifiable purchase and sale history. Therefore, a digital payments solution combined with a credit solution can be a very attractive value proposition for merchants.

A survey of Indian merchants undertaken by USAID in 2014 reinforces this hypothesis. The survey (figure below) found that easier availability of credit – for investment/working capital – is, in fact, one of the strongest incentives for merchants to go digital.

<sup>98</sup> ITU-T Focus Group Digital Financial Services, *International Telecommunication Union*, ‘Merchant Data and Lending: Can Digital Transaction History Help Jumpstart Merchant Acceptance?’, October 2016, p.5, [https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/10\\_2016/ITUFGDFS\\_REPORT\\_ON\\_Merchant%20Data\\_And\\_Lending-10-2016\\_final.pdf](https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/10_2016/ITUFGDFS_REPORT_ON_Merchant%20Data_And_Lending-10-2016_final.pdf)

<sup>99</sup> *World Bank Group*, ‘World Development Report 2016: Digital Dividends’, January 2016, p.96, <http://documents.worldbank.org/curated/en/896971468194972881/pdf/102725-PUB-Replacement-PUBLIC.pdf>



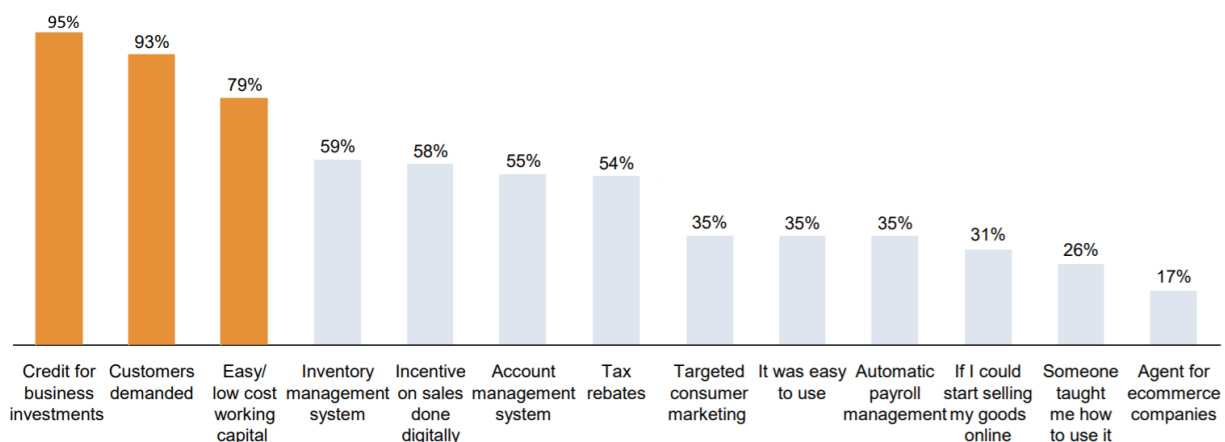


Figure 4: What drives the adoption of digital payments? (Source: USAID report)

### C) Value Added Services to help manage and grow the business

The survey by USAID (figure above) also found that Value Added Services such as inventory and account management could be important drivers for the adoption of digital payments as well. An ITU-T report<sup>100</sup> profiles an interesting case from Uganda and Kenya, of a company called Beyonic.<sup>101</sup> In addition to allowing merchants to digitize their payment workflows, Beyonic allows them to store supplier names, phone numbers and payment histories within the platform. This enables merchants to compare price fluctuations across time, and between suppliers, thereby helping them make better business decisions.

Integrated digital payments solutions that are user derived (through market surveys, field experiments etc.) and can address ‘multiple pain points through a single, simple solution’ are more likely to be successful than their traditional counterparts that offer plain vanilla payments options.<sup>102</sup>

### Promoting interoperability

Interoperability increases the utility of a digital payments solution, for both customers and merchants. Customers can transact easily at different terminals and merchants can invest in just one solution to serve a wide range of customers, just as they would do with cash. Interoperability is therefore essential for increasing efficiency (through shared infrastructure) and also for promoting competition. Because networks create natural monopolies, interoperability should be seen as a means to make it easier for new players to break into the market.

<sup>100</sup> International Telecommunication Union, ‘B2B and the DFS Ecosystem’, p.12, n.12

<sup>101</sup> Beyonic, <https://beyonic.com/>

<sup>102</sup> World Bank Group, ‘Innovation in electronic payment adoption: the case of small retailers’, p.37, n.6

The deliberations on interoperability should ideally be built into policy discussions right from the very beginning, before players start to consolidate their positions lest it become difficult to open the market after players have established market dominance. A case in point is Kenya. In Kenya, the government did not push for interoperability initially. Today, M-Pesa dominates the country's mobile money service market and conversations on interoperability are not making any headway.<sup>103,104</sup>

In comparison, the market developed in very a different way in Tanzania. Tanzania's experience also goes to show that service providers have most incentive to opt for interoperability when their market shares are comparable. In fact, in Tanzania, interoperability came about organically. In 2013, the Bank of Tanzania began encouraging discussions on account-to-account interoperability between mobile money providers (Airtel, Tigo, Vodacom, and Zante) for P2P transfers.<sup>105</sup> Interconnection started with Tigo and Airtel in September 2014, followed by the others. To begin with, providers seemed apprehensive of the benefits and worried that interoperability will negatively impact competition because customers will no longer differentiate between providers.

However, what this hypothesis failed to recognize was that in Tanzania's mature mobile money market acquisition was essentially leading to poaching, wherein customers simply shifted between networks. This was increasingly becoming an expensive tactic with limited growth potential. Following interoperability, Tigo reported an average monthly growth of 17% across in-bound (or receiving) and out-bound (or sending) P2P transfers. Annually, the values tripled between July 2015 and July 2016. Other providers cited similar growth.

Recognizing the benefits of interoperability for India, the RBI has already expressed its intention of allowing interoperability between mobile wallets. However, the draft guidelines published on RBI's website in March 2017 have the industry worried. RBI is mulling much stricter norms with respect to minimum capital requirements and KYC. The requirement on minimum positive net worth has been increased to Rs. 25 crore, as compared to the existing minimum of Rs. 1 crore. The existing wallets are also required to be converted to full KYC. Additional compliance requirements related to safety, money laundering and reporting have also been suggested.<sup>106</sup>

While it is understandable that there is a need to reduce and manage risk while allowing interoperability and broader integration with the payments ecosystem, it is also important to recognize that if norms are made too stringent, they are likely to have adverse consequences.

<sup>103</sup> Chadha, S. & Kagade, M., *Livemint*, 'Using interoperability to become cashless', December 2016, <http://www.livemint.com/Opinion/8D6uDxyeWmkKUQ8YeRAT0H/Using-interoperability-to-become-cashless.html>

<sup>104</sup> Jackson, T., *Quartz*, 'M-Pesa shows why mobile money is yet to realize its true potential in Africa', March 2016, <https://qz.com/639787/m-pesa-shows-why-mobile-money-has-failed-to-realize-its-true-potential-in-africa/>

<sup>105</sup> GSMA, 'The impact of mobile money interoperability in Tanzania', September 2016, p.8, <https://www.gsmaintelligence.com/research/?file=5176a26de119933587cb93811eb81be4&download>

<sup>106</sup> Master Directions on Issuance and Operation of Prepaid Payment Instruments in India, *Reserve Bank of India*, n.51



Especially with respect to KYC requirements, it would do well to remember that wallets were able to onboard users quickly primarily because it was easier to sign up. If KYC requirements are tightened again, the pace of adoption may slow down considerably.

### **Increasing acceptance across the supply chain**

Research suggests that the uptake of digital payments among merchants can be increased by onboarding suppliers to digital payments solutions and putting pressure on merchants from the supplier's side. Suppliers are also likely to have a strong incentive to use digital payments - conducting dealings in cash can be hard especially given the large volume of transactions and the associated costs of handling cash, estimated to be 1.7% of total volume of cash transactions for most suppliers.

A WB-WEF report profiles the case of Tienda Pago, a Latin-American start-up, which focuses on facilitating transactions between retailers and suppliers. In order to incentive suppliers (and retailers) to sign up, Tienda Pago offers a credit line to retailers by simply paying the suppliers on their behalf. Payments to the supplier are made digitally, whereas the retailer can repay Tienda Pago either digitally or in cash, along with interest of about 1-2% per week. Many suppliers have found this model attractive; within the first two years of its operations, Tienda had onboarded close to 4,000 retailers and large suppliers like Coca-Cola.

Another example is the solution used by Copia Global, a supplier, which provides a mobile 'layaway' plan to its retailers where they pay for goods in small instalments. This allows retailers to receive money from their own customers first before paying the supplier.<sup>107</sup> The ability to defer payments and rely on incoming receipts to pay suppliers is a strong incentive for retailers to adopt the digital solution.

In both these cases, payments by the suppliers are received digitally and the products have built-in incentives to encourage retailers to start using them as well.

### **Strengthening grievance redressal mechanisms to build trust in the system**

There is an urgent need for a robust and accessible grievance redressal mechanism to safeguard the interests of consumers and merchants and build trust in the system – both at the level of the solution provider and institutionally, at the level of the regulator. Currently, grievance redressal systems leave much to be desired. While payments via banking entities are still regulated by the RBI, in the case of payments handled by non-banking entities, regulatory oversight is severely lacking.<sup>108</sup>

<sup>107</sup> *International Telecommunication Union*, 'Enabling Merchant Payments Acceptance in the Digital Financial Ecosystems', p.11, n.7

<sup>108</sup> Vishwanathan, V., Livemint, 'How to handle e-wallet grievances', July 2017, <http://www.livemint.com/Money/bNJ8Z61Y98awzynsHrkKLJ/How-to-handle-ewallet-grievances.html>

For banking entities, the RBI recently published guidelines for limiting customer liability in case of unauthorized banking transactions.<sup>109</sup> The guidelines make it mandatory for banks to institute mechanisms to make customers feel safe, including SMS alerts and 24x7 channels for reporting unauthorized transactions. They also cap customer liability in different cases.

But, there are no such regulations for payments solutions by non-banking entities. The good news is that the government seems to have taken cognizance of the issue and is currently framing guidelines for consumer protection in digital payments.<sup>110</sup>

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<sup>109</sup> ‘Customer Protection – Limiting Liability of Customers in Unauthorised Electronic Banking Transactions’, Reserve Bank of India, July 2017, <https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=11040&Mode=0>

<sup>110</sup> *The Hindu*, ‘IT Ministry framing guidelines for digital payments’, January 2017, <http://www.thehindu.com/business/Economy/IT-Ministry-framing-guidelines-for-digital-payments/article17092985.ece>

# *Key takeaways*

## Key takeaways

The research referenced in this paper, the arguments explored and the case studies profiled point towards an interesting mix of product innovation, user incentives as well as policy and regulatory changes that can positively influence the adoption of digital payments solutions:

### Policy and regulatory changes

Relaxed regulatory regime for solutions by non-bank entities – Evidence suggests that penetration of digital payments is higher in countries that take a lighter-touch approach to regulation. Non-bank entities, especially mobile network operators are often much better suited for providing cash-in cash-out services because they are more experienced in managing large, low-cost distribution networks. Therefore, a regulatory framework which strikes a balance between risk mitigation and market development must be explored to allow innovative solutions in the field of digital money.

Easing KYC norms – For merchants, KYC requirements continue to remain cumbersome and prohibitive. Keeping KYC requirements minimal (and paperless) especially for small merchants is likely to help increase the penetration of digital payments.

Rationalizing indirect taxes – Given the prevalence of cash transactions in the Indian economy and the low levels of tax compliance, customers are likely to resist paying digitally if it requires them to internalize high indirect taxes. The government should actively consider rationalizing these taxes, or subsidizing the tax on transactions done digitally.

Re-rationalizing MDR and extending government support - Recognizing the high cost of acquiring merchants and the low volume of transactions per PoS terminal in the Indian context, the RBI must re-rationalize MDR rates to enhance incentives for increased deployment of card acceptance infrastructure. The creation of the proposed *Acceptance Development Fund* to build a corpus for expanding acceptance infrastructure should also be accelerated. Given the positive externalities of digital payments, the government should even consider subsidies and tax breaks.

Promoting newer low cost solutions – Incentivizing non-card based, low-cost solutions such as UPI should be a priority. Not only are these solutions easy to use, their potential to scale is immense.

Promoting interoperability between mobile wallets - Recognizing the benefits of interoperability, the RBI has already expressed its willingness to allow interoperability between mobile wallets. This must be pursued at the earliest. Not only will interoperability increase convenience, it is also likely to reduce barriers to entry and improve competition in the payments eco-system.

Designing stronger privacy norms and effective grievance redressal mechanisms – If digital payments are to be promoted, consumer trust in the system is absolutely critical. There is an

urgent need to plug regulatory gaps and put in place strong data protection and risk management norms along with effective grievance redressal mechanisms across payments solutions.

### **Product/ service innovation and user incentives**

Making the experience seamless, fast and convenient - Faster payment solutions through contactless transactions such as QR code based technologies have the potential to significantly decrease processing time and increase the attractiveness of digital payments.

Promoting low-value, high-frequency transactions – Embedding digital payment solutions in day to day lives through channels such as transit can make people more comfortable with the solutions and improve stickiness. Repeat usage can also change habits and trigger the adoption of digital solutions in other spheres.

Designing optimal referral programs – A well designed referral scheme which takes into account the effort involved in inducting new users and suitably rewards both the sender as well as the receiver can give a significant boost to adoption.

Providing add-on services and benefits to merchants – Offering innovative solutions that help boost profits may be the key to adoption by merchants. Three options should merit special consideration (1) add-ons to help tap new lines of business (such as bill payments) or those that increase customer reach (through channels such as online); (2) increased availability of credit on the basis on digital transaction history; and (3) value added services such as inventory and supplier management.

Pushing digital payments from the suppliers' side – Suppliers can be strong accomplices in the onerous task of getting retailers to adopt digital payments. Solutions that ride on digital payments history to help retailers meet their obligations to suppliers by providing short-term working capital loans can be powerful tools to aid adoption.

