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FINANCIAL INCLUSION
GLOBAL INITIATIVE



Electronic Payments Acceptance Incentives

Literature Review and Country Examples

APRIL 2020



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Abbreviations

AFIP	<i>Administración Federal de Ingresos Públicos</i> (Fiscal Authority of Argentina)	MMO	Mobile Money Operators
AML/CFT	Anti-Money Laundering / Combating the Financing of Terrorism	MSM	Micro and Small Merchants
ARS	Argentine Peso	MSME	Micro, Small and Medium Enterprise
AUH	Asignación Universal por Hijo (Social protection program)	MSP	Merchant Services Providers
B2B	Business to Business	MXN	Mexican Peso
BIS	Bank for International Settlements	NGN	Nigeria Naira
BMGF	Bill and Melinda Gates Foundation	NPAC	National Payments Advisory Council (Malaysia)
BNM	Bank Negara Malaysia	NPCI	National Payments Corporation of India
BTCA	Better Than Cash Alliance	P2B	Person to Business
CFDI	<i>Comprobante Fiscal Digital por Internet</i> (Digital tax receipt)	P2G	Person to Government
CNBV	<i>Comisión Nacional Bancaria y de Valores</i> (National Banking Commission)	PCRF	Payment Card Reform Framework (Malaysia)
DNB	<i>De Nederlandsche Bank</i> (Netherlands Central Bank)	POS	Point of Sale
EMV	Europay MasterCard VISA (Interoperability standard)	PPM	<i>Plataforma de Pagos Móviles</i> (Argentina)
EPA	Electronic Payments Acceptance	PSP	Payments Service Providers
EU	European Union	QR	Quick Response
FIGI	Financial Inclusion Global Initiative	RBI	Reserve Bank of India
G2P	Government to Person	RM	Malaysian Ringgit
GDP	Gross Domestic Product	SHCP	<i>Secretaría de Hacienda y Crédito Público</i> (Mexico Finance Ministry)
GPFI	Global Partnership for Financial Inclusion	SMB	Small and microbusinesses
IDB	Inter-American Development Bank	SME	Small and Medium Enterprises
IMF	International Monetary Fund	TIETP	Tax Incentive for Electronically Traceable Payments (Korea)
ITU	International Telecommunication Union	UPI	Unified Payments Interface
KYC	Know Your Customer	USD	United States Dollar
MDF	Market Development Fund	VAT	Value-Added Tax
MDR	Merchant Discount Rate	WBG	World Bank Group
		WEF	World Economic Forum

I. Introduction

The Financial Inclusion Global Initiative (FIGI) is a three-year program funded by the Bill & Melinda Gates Foundation (BMGF) to support and accelerate the implementation of country-led reform actions to meet national financial inclusion targets, and ultimately the global ‘Universal Financial Access 2020’ goal, implemented by the World Bank along with the International Telecommunications Union (ITU). FIGI aims to enable national authorities in developing and emerging markets to better harness the potential of digital technologies for financial inclusion, and to manage associated risks. FIGI funds national implementations in three countries, supports topical working groups to tackle three sets of outstanding challenges (one of them being electronic payment acceptance) in closing the global financial inclusion gap, and hosts three annual symposia to gather the engaged public on topics relevant to the grant and share intermediary learnings from its efforts.

The FIGI Working Group on Electronic Payments Acceptance is comprised of national authorities, international financial institutions, donors, standard setting bodies, and a wide range of private sector stakeholders. Its objective is to foster effective practices for enabling and encouraging acceptance and use of electronic payments, with an emphasis on person-to-business (P2B) payments, both for proximity payments at the point of interaction and

e-commerce, and on unserved and underserved groups. One of the Working Group’s work streams is incentives to electronic payments acceptance.

The FIGI Working Group on Electronic Payments Acceptance is premised on the concept that giving individuals access to transaction accounts is not sufficient. Beyond achieving universal access—whereby all adults worldwide will be able to have access to a transaction account or an electronic instrument to store money, send and receive payments—there is also the key issue of whether a transaction account actually provides benefits to its users, which is very often reflected in how frequently that account is used, including to access other financial services. Wide acceptance of non-cash payments is a pre-condition to uptake and effective usage of transaction accounts to: (i) perform most, if not all, payment needs; (ii) to safely store some value; and (iii) to serve as a gateway to other financial services.

Yet, acceptance of electronic payments remains limited among merchants: it has been estimated that P2B payments worldwide to medium, small and micro retailers amount to USD 18.8 trillion, only 37% of which are made electronically. Cash received for the purchase of goods and services is reused along the supply chain: worldwide, the share of electronic B2B payments by medium, small and micro retailers is 53%, and as low as 31% in South Asia.

This note aims to present a mapping of the most relevant literature on incentives to expand electronic payments acceptance (EPA) and some country examples where these incentives have been implemented. The goal is to identify the gaps in the literature to assist the FIGI Electronic Payments Acceptance Working Group (EPA WG) in defining deliverables to contribute to the literature and to policymakers' resources.

This note takes stock of the literature and some country examples of direct incentives to merchants and indirect incentives to EPA through incentives to customers. The literature review presents the most relevant publications that give a broad overview of the topic or a greater

understanding of a specific incentive. The compilation of publications does not aim to be an exhaustive list of references for the topic, but rather highlights those more relevant to the EPA WG.

Country examples included are those which have implemented EPA incentives and were all collected through desk research. Within each country, an effort was made to include all documented incentives implemented. However, neither the incentives documented in each example, nor the list of countries should be considered exhaustive. When available, information on the effect or estimated impact of the incentive is presented.

II. Summary of findings

The literature on electronic payments focusing specifically on incentives to acceptance is limited. However, there is a wealth of insights embedded in broader electronic payments ecosystem development reports as well as in the academic literature. Based on the literature and on examples of policies and initiatives implemented across the world, this note lists and catalogues the various types of incentives that can be used to incentivize electronic payments acceptance (EPA). The incentives were catalogued based on whether they were implemented by the public or private sector (or a collaboration between both), and then on five broad categories based on the type of incentive.

The first category is the **fiscal and financial incentives** which include merchant fiscal incentives, subsidies to retailers to install POS terminals, lotteries for consumers and merchants and consumer fiscal incentives. In general, the literature has a relatively good coverage of these incentives as they've been among the most widely implemented incentives to EPA and in many cases they have documented positive impacts on EPA.

The second category comprises **regulatory measures** to incentivize or mandate EPA. This category includes encouraging merchant formalization, implementing disincentives for cash usage including cash transaction limits,

regulating interchange fees and merchant discount rates, mandating the use of cash registers and mandating the disbursement of wages and salaries by electronic payments. We also find that these incentives have been widely used across countries, but with mixed or undocumented results.

The third category comprises **ecosystem development incentives** that are usually implemented jointly by the private and public sector. These include working on interoperability and standardization, establishing consumer protection, promoting financial literacy, strengthening telecommunication infrastructure and digitizing the supply chain. These incentives are generally indirect incentives to EPA, as their goals are usually broader or otherwise focused. However, the literature supports the role these incentives play in promoting EPA.

The fourth category includes **value-added services** that have been shown to be critical in the cost-benefit analysis merchants undergo when deciding whether to adopt electronic payments. Some of the documented value-added services that incentivize EPA include credit supported by electronic payments flow data, productivity solutions, revenue generating services and client relationship management all embedded on electronic payments acceptance solutions.

The fifth category comprises **technology innovations and new business models** that have enabled the cost of electronic payments acceptance to drop while also allowing acquirers to onboard previously hard-to-reach retailers. Some of these incentives include broadly defined new products and services, efforts to improve the product experience, non-traditional partnerships among providers and the figure of payment aggregators.

Table 1 presents an overview of the literature reviewed in this note and the incentives analyzed in each publication. The main findings of these documents are later summarized in Annex I of this note. Table 2 presents an overview of the identified incentives that were implemented in each country included in this note. A description of each of these incentives, and the impact information where available, are presented in Annex II.

From the analysis of the literature and country examples, the following common threads or potential conclusions were found:

- There is no single best incentive, but rather countries seem to implement a set of incentives.
- The best set of incentives could be related to the level of development in the market.
- Incentives have different effects in different countries; the implementation process seems to be crucial.

- Public sector incentives mostly focus on fiscal incentives, merchant subsidies and regulations discouraging cash use. Private sector incentives are mostly focused on product innovation including added-value services
- When conducting research on incentives it is useful to divide the market into different classes of retailers and consumers, as each of them display different needs, behaviors and challenges.

The main gaps identified in the literature are two: Firstly, there is no guidance on the regulatory and political context in which each of the incentives were implemented and how this context influenced their effectiveness. Secondly, the documentation on the impact of the incentives is scant mainly due to lack of *impact* evaluation embedded into the interventions/ programs.

Based on the findings of this stock taking note, the Electronic Payments Acceptance Incentives workstream will be developing a toolkit to guide authorities, international organizations and electronic payment ecosystem stakeholders (e.g. PSPs, payment and card networks) in the design and implementation of incentives to increase electronic payments acceptance. The toolkit will be comprising an assessment tool, a menu of incentives mapped to the assessment, and an implementation note documenting in detail country cases that can exemplify the incentive implementation challenges and keys to success.

TABLE 1.1 Overview of incentives covered in each publication

		Institutional author and year of publication												
		2018	2018	2018	2017 ^a	2017 ^b	2016 ^a	2016	2016 ^b	2016	2016	2015	2014	2014
Institution leading / type of incentive	Incentive category	Visa	WBG	BTCA	Master-card	Master-card	Visa	WEF and WBG	Visa	ITU	DNB	USAID	WBG, BMGF, BTCA	GSMA
Public sector	Fiscal and financial incentives	Merchant fiscal incentives												
		Subsidized POS terminals												
		Consumer fiscal incentives (VAT & income tax reductions)												
		Lotteries												
	Regulatory	Encourage merchant formalization												
		Disincentives for cash—cash transaction limits												
		Interchange fees and merchant discount rates												
		Mandated acceptance of electronic payments												
		Mandated cash registers												
		Mandated disbursement of wages and salaries by electronic payments												
Other	Government adoption of electronic payments													
Mixed	Awareness campaigns													
	Acceptance development funds													
	Ecosystem development	Interoperability and Standardization												
		Consumer protection and Financial Literacy												
		Telecommunication infrastructure												
	Supply chain digitization													
Private sector	Value-added services	Credit												
		Productivity Solutions												
		Revenue generating service												
		Client relationship management												
	Technology innovations and new business models	New products and services												
		Improving the product experience												
		Non-traditional partnerships												
	Payment aggregators													

TABLE 2.1 Overview of incentives implemented in each country example

Institution leading / type of incentive		Incentive category	Country / Jurisdiction									
			Argentina	China	Colombia	EU	Greece	India	Indonesia	Japan	Kazakhstan	
Public sector	Fiscal and financial incentives	Merchant fiscal incentives										
		Subsidized POS terminals										
		Consumer fiscal incentives (VAT reductions, income tax reductions)										
		Lotteries										
	Regulatory	Encourage merchant formalization										
		Disincentives for cash-cash transaction limits										
		Interchange fees and merchant discount rates										
		Mandated acceptance of electronic payments										
		Mandated cash registers										
	Other	Government adoption of electronic payments										
Mixed	Awareness campaigns											
	Acceptance development funds											
	Ecosystem development	Interoperability and Standardization										
		Consumer protection and Financial Literacy										
		Telecommunication infrastructure										
	Supply chain digitization											
Private sector	Value-added services	Credit										
		Productivity Solutions										
		Revenue generating service										
		Client relationship management										
	Technology innovations and new business models	New products and services										
		Improving the product experience										
		Non-traditional partnerships										
	Payment aggregators											

TABLE 2.2 Overview of incentives implemented in each country example

Institution leading / type of incentive		Incentive category	Country / Jurisdiction							
			Kenya	Malaysia	Mexico	Nigeria	Netherlands	S. Korea	Uruguay	USA
Public sector	Fiscal and financial incentives	Merchant fiscal incentives								
		Subsidized POS terminals								
		Consumer fiscal incentives (VAT reductions, income tax reductions)								
		Lotteries								
	Regulatory	Encourage merchant formalization								
		Disincentives for cash-cash transaction limits								
		Interchange fees and merchant discount rates								
		Mandated acceptance of electronic payments								
		Mandated cash registers								
		Mandated disbursement of wages and salaries by electronic payments								
Other	Government adoption of electronic payments									
Mixed	Awareness campaigns									
	Acceptance development funds									
	Ecosystem development	Interoperability and Standardization								
		Consumer protection and Financial Literacy								
		Telecommunication infrastructure								
Supply chain digitization										
Private sector	Value-added services	Credit								
		Productivity Solutions								
		Revenue generating service								
		Client relationship management								
	Technology innovations and new business models	New products and services								
		Improving the product experience								
		Non-traditional partnerships								
		Payment aggregators								

ANNEX I

Literature Covering Electronic Payments Acceptance Incentives

#	Year	Organization	Title (link)	Country	Focus
1	2017a	Mastercard	Building Electronic Payment Acceptance at the Base of the Pyramid to Advance Financial Inclusion	International	Analyzes barriers to small and microbusinesses EPA from the merchant and PSP perspective, and
2	2018	Visa	Maximizing the Impact of Financial Inclusion: Merchant-Centered Design and the Last Mile in China	International / China	Insights on the importance of the merchant-centered design as an approach to incentivize electronic payments acceptance among the smallest merchants.
3	2018	World Bank Group	Supporting Payment Sector Development: B2B corporate payments requirements in the traditional retail sector	International/ Indonesia	Guidance on the foundations required to support B2B payments in the retail sector and analysis of behavior, needs and challenges for different retailer profiles.
4	2018	Better than Cash Alliance	Achieving Development and Acceptance of an Open and Inclusive Digital Payments Infrastructure	International	High-level review of policy options and practical action that can help moving toward developing open and inclusive digital payment infrastructures and incentivize EPA and use.
5	2017b	Mastercard	Reducing the Shadow Economy through Electronic Payments	Central and Southern Europe	Analyzes and quantifies the costs and benefits of different policies to reduce the shadow economy, many of which incentivize electronic payments.
6	2016a	Visa	Perspectives on Accelerating Global Payment Acceptance	International	Comprehensive review of EPA incentives including case studies and recommendations of best incentives depending on market development stage.

#	Year	Organization	Title (link)	Country	Focus
7	2016	World Economic Forum and World Bank Group	Innovation in Electronic Payment Adoption: The case of small retailers	International	Reviews of main barriers to and incentives for EPA acceptance, from the perspective of micro, small and medium retailers, including innovation trends and case studies.
8	2016	ITU Digital Financial Services FG	Enabling Merchant Payments Acceptance in the Digital Ecosystems	International	Review and analysis of models to support merchant acceptance of eMoney payments.
9	2016b	Visa	Small Merchants, Big Opportunity: The Forgotten Path to Financial Inclusion	International	Analysis of barriers to EPA for micro and small merchants based on qualitative surveys and recommendations of incremental improvements for the various market stakeholders.
10	2016	De Nederlandsche Bank	Payment behavior: the role of socio-psychological factors	Netherlands	Academic paper on the socio-psychological determinants of choosing cash versus electronic payment instruments.
11	2015	USAID	Beyond Cash: Why India Loves Cash and Why That Matters for Financial Inclusion	India	Compendium of merchant and consumer quantitative survey insights into electronic payment acceptance and use.
12	2014	GPFI	The opportunities of digitizing payments	International	High-level guidelines covering payment digitization benefits and challenges for governments, recipients and providers.
13	2014	GSMA	Setting up shop: Strategies for building effective merchant payment networks	International	Insights into successful approaches to merchant acquisition and management from the mobile merchant provider perspective.

1. “Building Electronic Payment Acceptance at the Base of the Pyramid to Advance Financial Inclusion”, Mastercard. 2017.

This report from Mastercard focuses on small and micro-businesses’ (SMBs) challenges to accepting electronic payments and some potential solutions. The report groups the main barriers around four themes, with some of them affecting the merchants and others the payment service providers:

- i) Economics—cost of acceptance, lack of compelling product value proposition, cost of merchant sales and service, regulatory overhead, and tax liability;
- ii) Risk—financial risk, process risk, and regulatory ambiguity and inconsistency;
- iii) Distribution—disengaged MSPs, and misaligned distribution model;
- iv) Friction—cultural affinity to cash, lack of relevant rules, and poor infrastructure.

The report identifies three approaches to address the challenges:

- i) ***New products and services***—Make useful additions to product propositions to make electronic payment solutions attractive and relevant to SMBs. These include technological and process innovations that enhance value propositions to merchants, and improve the overall product experience. The report includes examples of lending programs using transaction data for credit decisions such as Square Capital, and merchant rewards programs such as Eeziklik Global.
- ii) ***New business models***—Design new business models to reduce costs and increase the viability of business models servicing SMBs, focusing on driving collaboration among payment service providers and deploying new partnership models. These include new models of collaboration and cooperation among payment service providers, and new partnership models that incorporate digitization across supply chains.
- iii) ***Market development initiatives***—Invest in market development initiatives through collaboration with the public and private sectors to overcome structural barriers to acceptance and to incent market participation and innovation.

FIGURE 1. Mastercard: Summary of Approaches and Levers to Drive Electronic Payments

Approach	Objective	Potential levers
New products & services	Deploy new products and services to: <ul style="list-style-type: none"> • Provide enhanced value proposition • Improve product experience 	Provide enhanced value propositions <ul style="list-style-type: none"> i. Credit ii. Productivity solutions iii. Revenue generating services iv. Loyalty programs Improve the product experience <ul style="list-style-type: none"> i. Digital ID solutions ii. Smartphone app-based solutions iii. Real-time, push-payments iv. Improved and robust transaction processing v. Streamlined, variable, risk management practices vi. Technical interoperability in products and services
New business models	Pursue innovative business model approached to: <ul style="list-style-type: none"> • Increase collaboration and cooperation among providers • Overcome various acceptance barriers 	Collaboration and cooperation among payment service providers <ul style="list-style-type: none"> i. Grow both sides of the market simultaneously ii. Resolve the “last mile” distribution challenge iii. Enable interoperability iv. Share resources with utility characteristics New partnership models <ul style="list-style-type: none"> i. Cross subsidize acceptance costs ii. Digitize supply chains
Market development initiatives	Pursue initiatives and partnerships to: <ul style="list-style-type: none"> • Overcome structural barriers to acceptance • Incent market participation and innovation 	Overcome structural barriers <ul style="list-style-type: none"> i. Establish an enabling policy and regulatory environment ii. Enable coordination and alignment amongst ecosystem participants iii. Investments in payments enabling public goods Incent market participation and innovation <ul style="list-style-type: none"> i. Establish collaborative facilities to mitigate business risk ii. Market enablement of new ecosystem participants

Source: Mastercard, 2017a.

Regarding the last approach, market development initiatives, the authors argue the government plays a key role in creating a competitive level playing field, addressing barriers to innovation, and in ensuring optimal prices by allowing market forces to determine them. They also note that policies aiming to drive merchant adoption should focus on: i) providing incentives for adoption; and ii) minimizing the economic advantages of informality.

The authors mention the following government-led initiatives to incentivize electronic payments adoption:

- Digitizing government flows to contribute to a critical payment mass;
- Subsidizing the cost of acceptance at early stages of development;
- Creating collaboration opportunities between PSPs to ensure interoperability;
- Investing in financial literacy;
- Establishing collaborative facilities to mitigate business risk;

- Enabling new ecosystem participants through new rules to develop and leverage technology innovation, including proportional risk-based merchant validation processes.

2. Maximizing the Impact of Financial Inclusion: Merchant-Centered Design and the Last Mile in China”, Visa. 2018.

This white paper presents the importance of the merchant-centered design as an approach to incentivize electronic payments acceptance among the smallest merchants and uses the last-mile challenges faced by China to illustrate the analysis.

The paper defines three main challenges for the corner store: i) not having a bank account; ii) not seeing cash as a problem; and, iii) operating with thin margins and low-value transactions. The paper proposes merchant-center design as the solution.

Digital systems with the corner store in mind are simpler and cheaper. Thanks to technology and innovative regulations, POS hardware has been simplified and made readily accessible to merchants. The payment experience

has also been simplified through phone to phone push payment features, for example, through QR codes. Simplified KYC accounts and interoperability contribute to increased accessibility and use.

By linking the acceptance of digital payments to other financial services, merchants can increase sales, exploit new revenue streams (e.g. phone top-ups and bill pa) and access other financial services (e.g. credit).

A huge incentive for merchants to go digital, is digitizing their ordering, purchasing and payment to suppliers. This also opens the opportunity for financial service providers to offer complementary services such as operations and decision making based on data analytics.

According to the paper, reaching the tipping point in the market is key. Visa estimates small merchants more readily take up digital payments when about 40 percent of their surrounding environment, or their top 3 to 4 suppliers are digital. To reach the tipping point, on top of digitizing mid-sized enterprises and those serving higher income clients, Visa identifies the following actions:

- Removing barriers that make onboarding unnecessarily complicated and/or time consuming (e.g. through creation of payment aggregators);
- Creating a policy and regulatory environment that promotes electronic payment acceptance, through direct incentives to merchants and customers, sound infrastructure and a framework that enables and encourages innovation;
- Supporting merchants in building their financial literacy and business skills.

3. “Supporting Payment Sector Development: B2B corporate payments requirements in the traditional retail sector”, World Bank Group, 2016.

According to the authors, focusing on retailers’ and wholesalers’ payments to their suppliers (B2B) provides a pragmatic way to use economic incentives to expand electronic payment adoption. Suppliers to small and traditional retailers are often banked and interested in reducing their reliance on cash. Therefore, unlike P2B payments, in the case of B2B payments only one party needs to be incentivized and assisted in the transition away from cash.

To encourage the adoption of electronic payments in this market segment, the report outlines three requirements: i) Digital solutions should be as easy to use as cash, and should consider the potential mismatch with cash inflow, as well as digital versus paper monitoring business practices; ii) Payment networks should be interoperable at every stage of the process, including payment confirmation and account reconciliations; iii) Non-payment benefits need to be available for suppli-

ers and retailers, for example deferred payment or credit terms for retailers.

The report also highlights specific needs, behaviors and challenges that traditional retailers display and encounter in relation to B2B payments. For this purpose, the report classifies retailers into a four stylized profiles matrix by size and automation level.

The authors analyze how business payments fit into the larger purchase end-to-end process, and then parse out the different steps involved in the payment itself focusing on the key aspects for buyer and seller. They conclude that to incentivize the use of electronic payments, these most include benefits in the form of firm- and sector-level efficiency gains from automation and supply chain integration. Furthermore, the report notes that payment services need to be designed in a manner that supports the aims of sales and commercial development where process automation and data collection steps are needed.

Building the capacity of small retailers and wholesalers, and facilitating their adoption of digitization and process automation (e.g. using electronic inventory and management tools), will reduce the barriers and enhance the benefits of adopting electronic payments. Government can play a key role in providing incentives to adopt these business practices and through e-invoicing and tax reforms.

4. “Achieving Development and Acceptance of an Open and Inclusive Digital Payments Infrastructure: Guidance Note for the G20/GPFI Markets and Payment Systems Subgroup”, Better than Cash Alliance. 2018.

This guidance note was drafted as an input for the GPFI Policy Guide for the G20 Argentine Presidency of 2018. The note focuses on policy options and practical actions that can lead to open and inclusive digital payment infrastructures, while incentivizing the use and acceptance of digital payments. The note concludes that opening and modernizing payments infrastructures will lead to a higher number of suppliers offering payments services to merchants and end users. To directly incentivize digital payment uptake the note mentions the following policy options:

- Prioritizing large-scale use cases to build momentum, for example, through G2P payments digitization;
- Incentivizing merchant adoption through standardization, interoperability and direct incentives to adoption as incentivizing the cost of acceptance at early stages of development, or tax incentives;
- Incentivize consumers by focusing on increasing utility, affordability and trust. This includes reducing fees, ensuring consumer protection, and providing direct financial incentives (e.g. lotteries, tax incentives).

5. “Reducing the Shadow Economy through Electronic Payments”, Mastercard. 2017b.

The report analyzes and quantifies the costs and benefits of different policies to reduce the shadow economy in the Central and Southern European countries. Most of these policies incentivize digital payments to reduce the shadow economy. In particular, an increase in the total value of card payments at physical terminals in relation to GDP by 1% led, on average in the analyzed sample period, to a decrease in the passive shadow economy by 0.037 percentage points of GDP.

The authors differentiate between passive shadow economy (where consumers pay with cash without intention of concealing the transaction) which can be reduced through incentivizing electronic payments, and committed shadow economy (where both merchant and consumer want to conceal the transaction) and electronic payment incentives would have no impact.

To quantify the benefits and costs of the policies the authors perform ad-hoc calculations using elasticities or benchmarks from the literature and/or making conservative assumptions. For some policies they use regression analysis and for others simple calculations.

Policies to incentivize electronic payments (and thus reduce passive shadow economy) include the following. For each policy the authors estimate the potential reduction in passive shadow economy in each country.

- i) Obligation to make an electronic payment of wages and salaries (increases perceived cost to get cash for consumers);
- ii) Obligation to make an electronic payment of social security benefits (increases perceived cost to get cash for consumers);
- iii) Threshold for consumer cash payments (illegal to pay in cash over certain threshold);
- iv) Obligation to possess cash registers (indirectly incentivizes POS installation);
- v) Obligation to operate POS terminals for selected types of businesses (increases POS installation);
- vi) Tax incentives for consumers (cash-back awarded to card payments);
- vii) Tax incentives to merchants (reduces effective cost of accepting cards);
- viii. Receipt lotteries

The report includes good diagrams of the channels of transmission or theory of change of each of these policies.

6. “Perspectives on Accelerating Global Payment Acceptance”, Visa. 2016a.

This report includes a comprehensive overview of incentives to electronic payment acceptance, both from the public and the private sector.

In its first section, the report discusses the barriers that slow the growth of EPA (infrastructure, economic, regulatory). The rest of the document goes on to analyze the different policy approaches to overcome the barriers and their suitability for different market development stages. In order to identify the market development stage, and map these to the most suitable policy approaches, the authors create 4 market categories based on the level of consumer adoption and acceptance penetration as shown in Figure 2. These are Cash-centric, Transition (limited acceptance), Transition (limited consumer adoption), and Electronic.

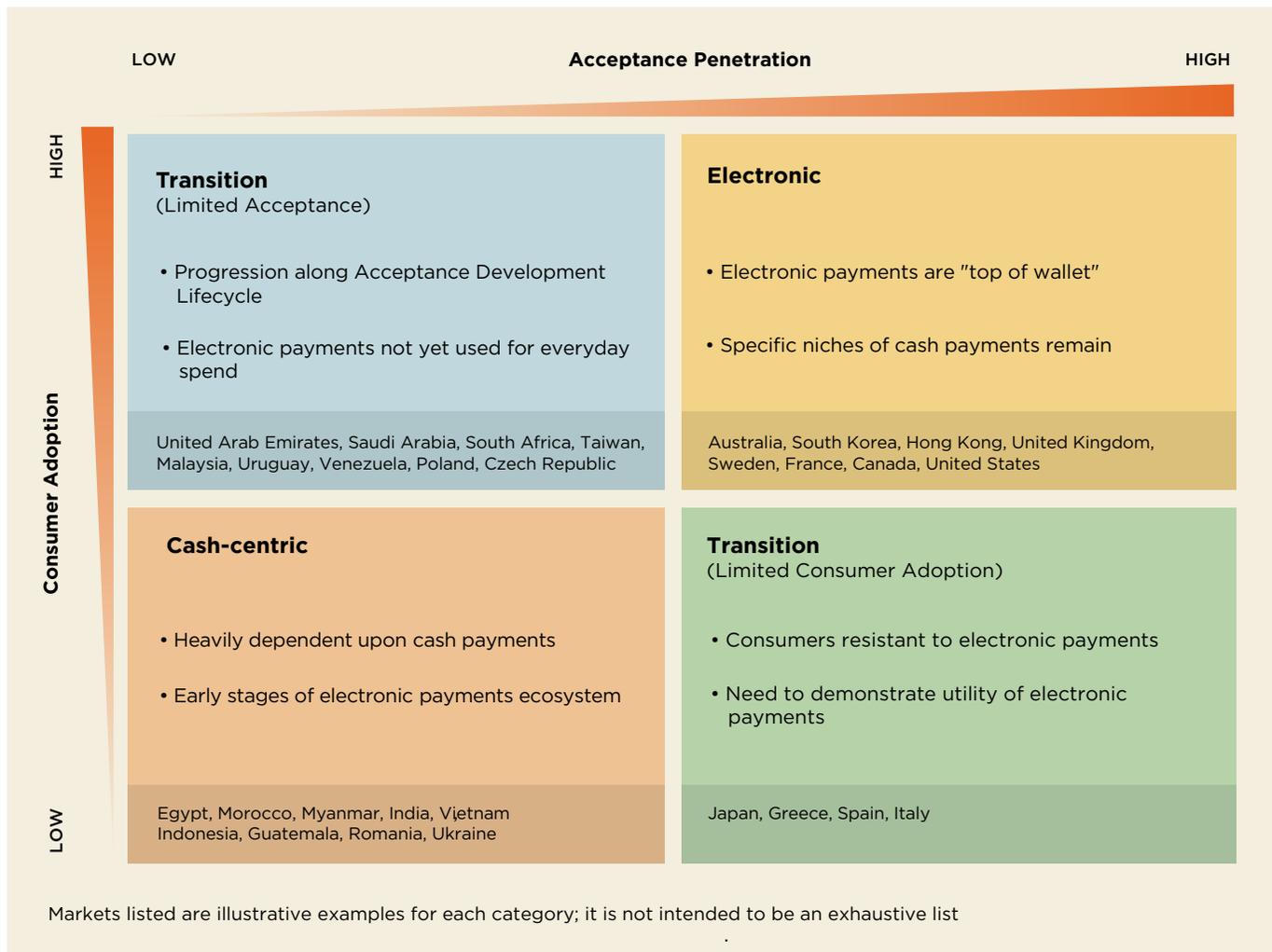
To evaluate the success of programs and policies the authors base their analysis on i) number and volume of electronic payments; ii) electronic payment volume as percentage of consumer spend; iii) average ticket value; and iv) number of merchants and acceptance point/ POS terminals. However, some of the programs are evaluated indirectly by presenting the results of existing evaluations in the literature or by deriving conclusions from individual case studies.

The report presents a wealth of case studies and examples of different policy approaches and incentives to reduce EPA barriers. The following is an overview of the incentives included in the report and in which market development stage they could be best suited for.

I. Regulatory and Market Support

- i) *Merchant incentives*—Subsidies for POS and tax reductions (VAT credits) are successful in cash-centric or transition (limited acceptance) markets where payment infrastructure is limited but card base is sufficient. To develop network acceptance, policies targeting SMEs or specific geographies are well suited. For countries with enough POS base but low EP usage, volume-based incentives have proven effective.
- ii) *Regulation of market economics*—Reducing merchant costs of EPA (through capping MDR, interchange fees) create imbalances and might reduce acquirer motivation to expand network or invest in innovations.
- iii) *Consumer incentives*—Includes VAT rebates, income tax deductions or lottery promotions based on card usage. Lotteries work well in early stages of EPA.

FIGURE 2. Visa: Framework for Categorizing Markets



Source: Visa (2016a).

iv) Disincentives for cash—Includes taxes or bans on cash withdrawals or deposits over certain threshold, and works well in markets with significant shadow economies, but not very effective as a standalone measure.

v) Government adoption of electronic payments—Includes G2P and P2G, and have the highest incremental impact in markets with a card base but low EPA.

II. Increased Private Investment Opportunities

i) Issuer-funded investments for acceptance—card issuers contribute funds to direct terminal subsidies, technology development or market education; successful primarily in transition and electronic markets.

ii) Specific merchant segment initiatives—Lower interchange fees or different operating rules for specific

merchant segments where EPA is less developed are effective in markets with sufficient card issuance scale but persistent gaps.

III. New technologies and Channels

i) New platforms for payment and acceptance—New modes of access and omnichannel (“card-on-file” accounts), wireless networks and mPOS devices, growth of new payment facilitator networks, benefit all types of markets.

ii) Enhancing and securing the customer experience—Fostering “responsible innovation” through EMV chips, tokenization, biometric authentication, is relevant for all markets.

FIGURE 3. Visa: Summary of Recommended Policy Lever Applicability by Market Type

			Cash-centric	Transition		Electronic
				Limited acceptance	Limited consumer adoption	
Illustrative Markets			Egypt Myanmar Guatemala	UAE Indonesia Uruguay	Greece Japan	Israel Hong Kong Canada
Policy levels	A. Regulatory and Market Support	Merchant incentives	●	●		
		Consumer incentives	●	●	●	●
		Disincentives for cash	●		●	
		Government adoption of electronic payments	●	●		
	B. Increased Investment Opportunities	Issuer-funded investments for acceptance		●		●
		Specific merchant segment initiatives		●		●
	C. New Technologies & Channels	New platforms for payment and acceptance	●	●	●	●
		Enhancing and securing the customer experience	●	●	●	●

Source: Visa (2016a).

7. “Innovation in Electronic Payment Adoption: The case of small retailers”, WEF and WBG. 2016.

The report reviews the main barriers to and incentives for the acceptance and use of electronic payments, from the perspective of micro, small and medium retailers (merchants) and presents innovation trends and cases.

The authors identify six main obstacles to the adoption of electronic payments by merchants, of which the first four could be primarily targeted by the industry, while the last two obstacles could be targeted by policymakers.

- i) Inadequate value proposition for merchants including inadequate product design;
- ii) Weak product and stakeholder economics in traditional card models;
- iii) Insufficient aggregate customer demand and supply to reach ‘tipping point’;
- iv) Inconsistent technological infrastructure and regulatory environment in developing markets to support electronic payments;
- v) Ineffective distribution models to serve hard-to-reach merchants;
- vi) Difficulty in formalizing enterprises and reluctance of merchants to pay full taxes on sales.

For policymakers, suggested actions are grouped in three categories: e-payment infrastructure, formalization of enterprises, and partnership and alliances. On formalization of enterprises, the report mentions incentivizing firms

to formalize could help remove a key obstacle to expanding the acceptance network as some payment schemes only serve formal businesses. One recommendation is to simplify tax codes to encourage informal merchants to formalize.

The report presents several disruptive models across the world that are making progress in small merchant electronic payment acceptance. Many of the case studies presented focus on offering a range of value-added services to the merchants including through combined solutions that help manage and grow their business, through use of data, and through simplifying the supplier chain payments. Examples of these solutions include Kopo Kopo in Kenya, and Grupo Bimbo in Mexico.

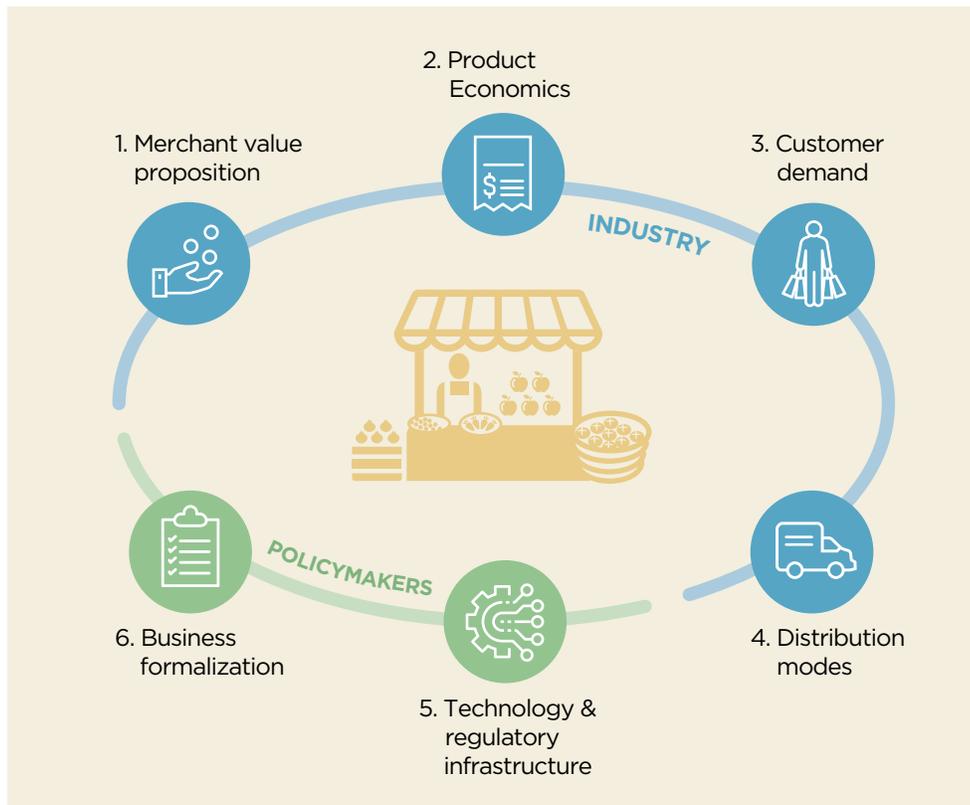
8. “Small Merchants, Big Opportunity: The Forgotten Path to Financial Inclusion”, Dalberg commissioned Visa. 2016b.

The report analysis the existing barriers for Micro and Small Merchants (MSMs) to accept digital payments and offers recommendations of incremental improvements for the various market stakeholders. It includes several MSMs anecdotes from qualitative interviews to 300 MSMs merchants and 70 key stakeholders across Colombia, Peru, Indonesia, Philippines, Nigeria and South Africa.

The identified barriers to cashless acceptance which should be considered when designing incentives are:

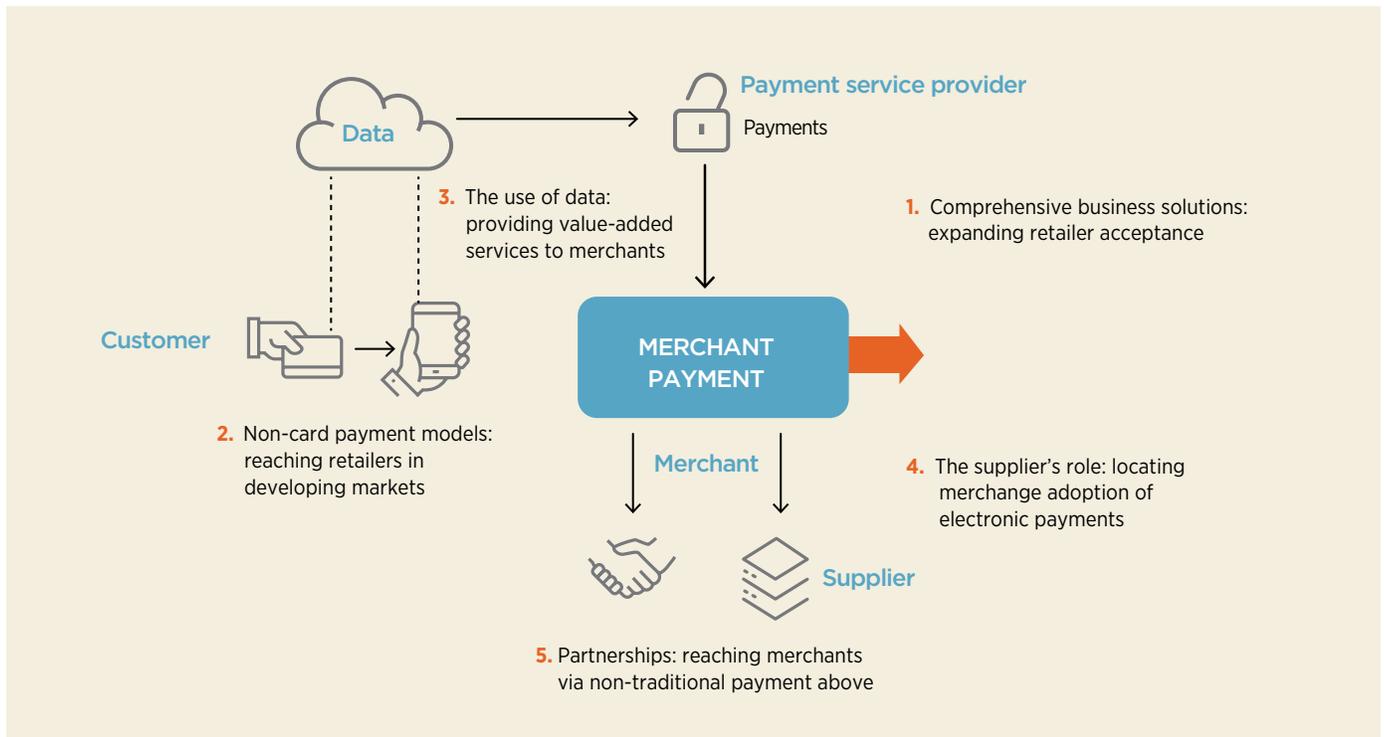
- i) *Traditional benefits do not apply*—MSMs do not experience or expect increased sales with cashless acceptance, and costs and risks associated to cash handling are perceived as small. In some cases, merchants even

FIGURE 4. Key obstacles and the roles of industry and policy-makers in addressing them



Source: WEF and WBG, 2016.

FIGURE 5. Key innovation trends for merchant payment solutions



Source: WEF and WBG, 2016.

perceive fraud risk to be higher with electronic payments. Losing clients due to lack of EPA is not a high concern.

ii) *Poor product experience*—MSMs need cash for their daily operations and to pay suppliers; accepting electronic payments introduces logistical problems. They also consider digital payment process to be complicated and prone to error. MSMs also find it difficult to understand how to get a POS and there is market exclusion towards informal merchants.

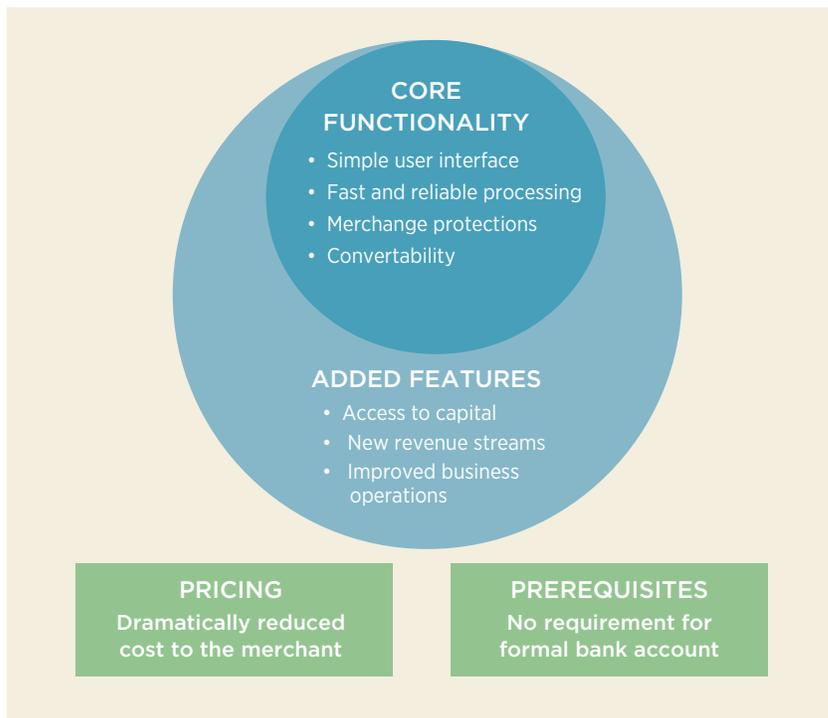
iii) *Fees and financial risks are high*—Transaction fees erode thin profit margins and unanticipated fees create hardship that does not exist when accepting cash.

Some of the underlying drivers leading to these barriers are that payments systems and business models were not designed to serve MSMs, traditional payment service providers have low incentives to serve them, and stringent financial sector regulations are rarely designed with MSMs in mind.

To expand MSM EPA, the authors identify the following requirements:

- i) *Incremental improvements*—For MSMs ready to accept digital payments (younger, better educated, formal, urban), the industry should develop simpler, less expensive and more robust card terminals, better merchant protections against chargebacks or fraud, shorter settlement times, enhanced access and service and reduced costs. Adding features that support business growth, such as access to capital, access to new revenue streams or add-on features to facilitate improved business operations can also be incentives for EPA.
- ii) *Radical innovations*—For MSMS not ready to accept digital payments, the industry should offer innovative solutions that are inexpensive or even (initially) free and which don't require a formal bank account. These radical innovations will likely require the participation of new players and partnerships. For regulators, promoting competition, interoperability and reforming regulatory requirement which might act as barriers (KYC requirements, for example) are also key requirements for innovation.
- iii) *Growing the cashless ecosystem around MSMS*—Involves creating more cashless 'outflows' for merchants (e.g. utility and supplier payments) and increasing cashless customers with easy-to-use payment accounts.

FIGURE 6. Visa: Potential Incremental Improvements to the product offering



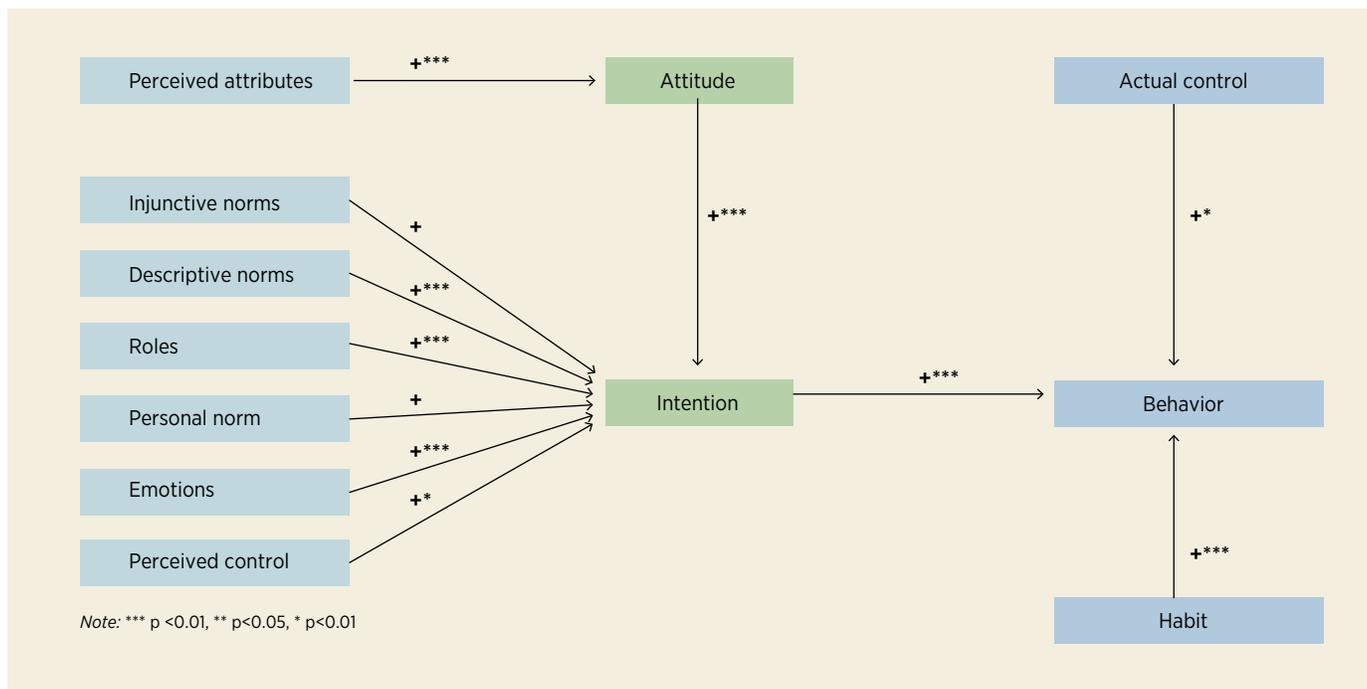
Source: Visa, 2016b.

9. “Enabling Merchant Payment Acceptance in the Digital Financial Ecosystems”, ITU Focus Group on Digital Financial Services, 2016.

The second section of this report analyses the merchant acceptance of eMoney payments focusing on four dimensions: i) business models; ii) deployment openness; iii) transaction flow; and iv) pricing.

In terms of business model, the in-house model represented by ZAAD and M-PESA does not provide a path to scale because it is difficult, without a dominant market player, to create the necessary network effect in-house to create compelling value for merchant acceptance. On the other hand, the merchant services provider (MSP) model is a driver of new technology adoption leading to merchant acceptance and creates pressure to move towards open loop or interoperable structures. Finally, merchant acquirer models allow mobile money operators (MMOs) to pursue a card centric approach with a physical point of interaction to drive merchant acceptance. While the approach may present an opportunity to scale merchant acceptance, a further evaluation is required.

FIGURE 7. Model of payment behavior: summary of regression results



Source: De Nederlandsche Bank, 2016.

10. “Payment behavior: the role of socio-psychological factors”, Carin van der Crujisen and Frank van der Horst, De Nederlandsche Bank. 2016.

This academic paper examines the role of socio-psychological factors on consumer’s choice between cash and electronic payment instruments, in particular, debit cards. The authors use a theoretical model of payment behavior and test it empirically with data from a representative panel survey of Dutch consumers.

The authors show that payment behavior depends on three main variables: payment intentions, habit and actual control.

They paper concludes payment intentions can be influenced through: i) strengthening positive attitude towards the instrument by improving perceived attributes of the payment instrument, in particular their safety and acceptance; ii) creating the feeling that it’s an appropriate instrument for one’s age or lifestyle, for example, through media campaigns; iii) social norms by increasing people’s perception of others using the same instrument; iv) reinforcing a pleasant, familiar and simple experience; v) increasing the degree of perceived control over the instrument.

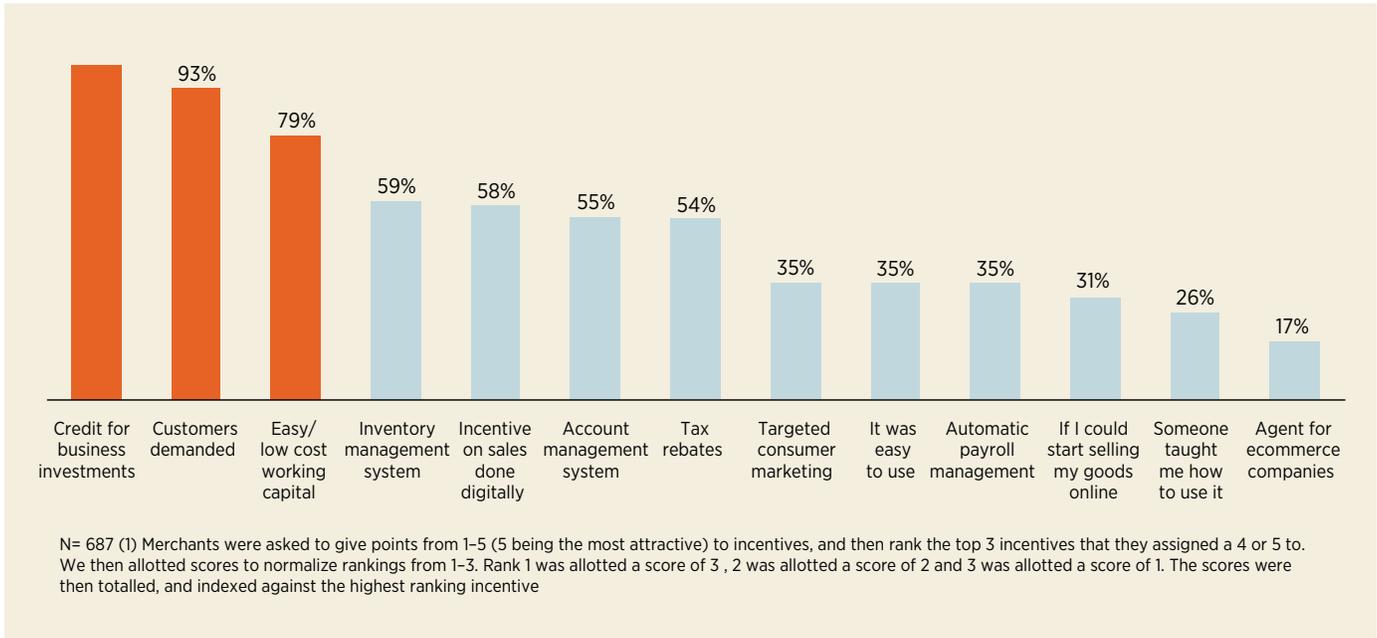
11. “Beyond Cash: Why India Loves Cash and Why That Matters for Financial Inclusion”, Dalberg commissioned by USAID. 2015.

The two presentation and online executive summary present the findings of an **ethnographic and quantitative** study in India targeting consumers and merchants to understand the low penetration of digital transaction instruments. One of the slide decks presents a categorization of merchants into six different merchant personas, and identifies key insights and design principles to incentivize electronic payment adoption for each category.

The study found several stylized facts on merchant electronic payment acceptance, including:

- Merchants who accept digital payments are highly satisfied with the experience with the vast majority willing to recommend to other merchants;
- Among merchants who do not accept digital payments, awareness and interest is low;
- Merchants, like consumers, are trapped in cash ecosystems, which inhibits their interest;
- Merchants highlight the high cost of trying out digital payment acceptance as a barrier;
- Vast unmet demand for credit can be used as a “hook” for digital payments acceptance;

FIGURE 8. Cumulative ranking scores of most attractive incentives for merchants (answered by non-digital payment accepting merchants, % indexed to the highest ranked option)



Source: "A partnership to Support Financial Inclusion Through Expanded Payments Acceptance Networks and Other Efforts", USAID. 2015. Available [online](#).

The study concludes by offering incentive recommendations which include:

- Enabling merchants to try digital payments acceptance at low or no cost, for example, by having PSPs remove upfront fees and device installation charges and moving towards pay-per-use models;
- Incentivizing retailers to pay distributors digitally to reduce the need for cash payments;
- Using transaction-based credit as a "hook" for acceptance;
- Incentivizing existing merchants to further use digital payments through tax and monetary incentives for their digital sales, and providing discounts and incentives for recommending others to onboard;
- Communicating the benefits of digital payments that could offset cost liabilities through joint campaign by all stakeholders (government, banks, PSPs).

12. "The Opportunities of Digitizing Payments", GPFI. 2014.

This report covers high-level guidelines presented to the G20 Global Partnership for Financial Inclusion (GPFI) covering payment digitization benefits and challenges for governments, recipients and providers.

From the supply side, the report mentions the following challenges: i) safety and reliability; ii) interoperability of bank and nonbank service providers; iii) physical infrastructure; iv) increasing cash-out points; v) sticky prices; vi) building a digital ecosystem; vii) political economy issues. From the demand side, it lists the following challenges: i) customer experience; ii) product design; iii) consumer education; iv) usage of accounts; v) gender disparities in mobile ownership.

The report then offers a vision on the role that the government should play in promoting digitization. For the government, the report mentions i) constructing a supportive regulatory environment which includes clear regulatory framework for new players; ii) establishing an appropriate financial consumer protection framework; iii) playing a catalytic role in building a digital ecosystem through G2P payments; and iv) promoting product understanding.

Finally, the document outlines the importance of the government as an enabler for the private sector to innovate and offer inclusive solutions. In particular, the government should i) support private-sector investment in infrastructure and the massive scale-up of cash-out points (agent networks); ii) enable the private sector to develop networks that are convenient, reliable, secure and private; iii) foster the development of innovative business models; and, iv) create opportunities and an environment for cooperation.

13. “Setting up shop: Strategies for building effective merchant payment networks”, A. Katakam, GSMA. 2014.

This report is based on insights from the 2013 State of the Industry Report on Mobile Financial Services to gain a better understanding of the successful approaches to merchant acquisition and management from the mobile merchant provider perspective.

One of the main takeaways is that having a strong value proposition is essential to hold merchant’s interest. This includes using segmentation to attract the right merchants with an appropriate commission structure, and providing merchants with a complete experience (fast settlement and access to their transaction data) to increase their confidence in the system.

The report uses Kopo Kopo (Kenya) as an example of a merchant service company employing this strategy. After realizing they were signing up merchants rapidly without much increase in transaction volumes they changed their approach: the company segmented their market and targeted merchants with strongest pain points that could be solved by mobile money and changed their commission structure for sales representatives to one rewarding not only sign up but also merchant activity. Furthermore, Kopo Kopo introduced Kopo Kopo Grow—a cash advance service targeting business development needs with repayments based on electronic sales. The repayments are perfectly aligned to cash flows with higher deductions when sales are higher, and no deductions when there are no sales. The strategy allowed them to quadruple their merchant active rate while cutting acquiring costs.

ANNEX II

Country EPA Incentives Examples

1. ARGENTINA



In 2001 Argentina's Finance Ministry introduced a 5 percent VAT refund on debit card purchases under ARS \$1,000 (~51 USD) to promote electronic payment use. The incentive was extended to credit cards in 2003, with a 3 percent VAT refund that was later eliminated in 2009. The debit card transaction tax refund was eliminated in 2017 when the administration deemed it as a subsidy to the most affluent population (those who have debit cards) and expected savings from eliminating the incentive.

In 2016 the Central Bank of Argentina introduced the Plataforma de Pagos Mviles (PPM) innovations to promote digital payments. The platform includes two main innovations that could impact electronic payment acceptance:

- POS Movil—Financial institutions must offer to their clients the possibility to receive/send immediate transactions through dongles (that must be offered by the institution but also must be compatible with third party dongles). The solution currently offered has fees per transaction and no monthly fixed rate.
- Boton de pago—Financial institutions must offer a “Payment Button” software solution enabling consumers to send immediate transfers in e-commerce.

All financial institutions with homebanking must offer the services and all payments for goods and services must be free of charge up to a monthly amount equivalent to one-twelfth of the maximum annual sales of a micro-enterprise in the services sector

Per Article 10 of Law 27.253, the Argentinian fiscal authority AFIP announced in 2016 that by the end of 2017 all merchants and service providers to final consumers would have to accept debit card payments. Up to 50% of the POS monthly rent fee could be computed as fiscal credit by merchants. AFIP would also reduce by 50% all VAT retentions completed by debit cards. Furthermore, for small merchants (*monotributista*) transactions with debit card would have no transaction fees and the leasing cost for the POS machine would be waived for the first two years.

Per Decree 858, social benefit recipients from four government programs (AUH, minimum pension, pregnancy transfer and pension with no contribution) will be able to claim up to 15% of basic food basket purchases up to a ARS \$300 (~USD \$15) monthly cap only if completed through debit or prepaid cards.

References:

- [i] Banco Central de la República Argentina (2016). Circular SINAP 1 -48: Transferencias inmediatas de fondos por el canal 'Plataforma de Pagos Mviles - (PPM)'. .
- [ii] Bloomberg BNA. January 5, 2017. Argentina Ends 5 percent VAT Rebate on Debit Cards.
- [iii] Sung, M. J., R. Awasthi, and H. C. Lee. 2017. Can Tax Incentives for Electronic Payments Reduce the Shadow Economy? Korea's Attempt to Reduce Underreporting in Retail Businesses. *Policy Research Working Papers*: 7936.
- [iv] AFIP. Operaciones con tarjeta de débito.

2. CHINA



China has created a sound payments system infrastructure and an enabling environment to innovate. Government policy has been key in creating this environment. For example, the regulatory framework allows a class of individually operated business to use personal payment products which simplifies and encourages banking onboarding through a streamlined KYC verification and lower costs. The country has one of the largest agent networks in the world with almost one million banking agents throughout 90% of China's villages. It also has a widespread mobile and internet infrastructure that's price accessible to consumers. With over 753 million internet users in China by 2017, internet penetration reached almost 56 percent in the country.

The penetration of individual electronic payments is high: almost four out of five Chinese make payments through their mobile phones. The use intensity has seen an incredible growth with 3.7 billion transactions made through non-banking mobile apps in 2013, to over 97 billion in 2016.

The use of big data has enabled market participants to offer value-added services. One such example is Industrial and Commercial Bank of China's (ICBC) "Corporate Easy Loan" targeted at micro and small merchants which assess creditworthiness through big data analysis of merchant transactions and business operations. Their loans do not require traditional security deposit or guarantee.

[i] Visa (2017). Maximizing the Impact of Financial Inclusion: Merchant-Centered Design and the Last Mile in China. *Paper available upon request.*

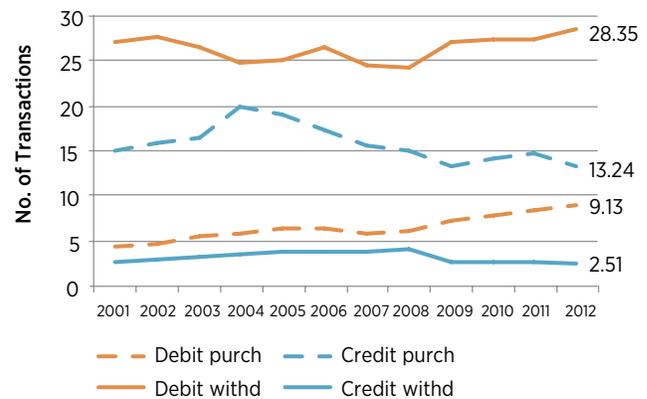
3. COLOMBIA



In 2004, the Colombia government introduced a 2 percent VAT rebate for purchases made with cards. The tax incentive was eliminated in 2014 shortly after the issuance of a Fiscal Reform. Approximately 3 million people received the rebate during each year of the program. According to BTCA (2015) the rebate had little impact on consumers' motivations to use cards for payment. Per the Banking Association in Colombia, the policy was successful but its potential was hindered by a complicated process to claim the rebate both for consumers and for the fiscal authorities.

The Colombian government later introduced restrictions on deductibles in the 2014 Fiscal Reform. Expenses that are deductible for tax purposes are those made through deposits in bank accounts, bank transfers, checks, or credit/debit cards. Cash payments are only deductible below certain thresholds.

FIGURE 9. Purchases and withdrawals per type of card per year, 2001-2012, Colombia



Source: BTCA, 2015.

References:

- [i] Marulanda, B. and Bankable Frontier Associates (2015). Country Diagnostic: Colombia. BTCA.
- [ii] Asobancaria (2015). Incentivos tributarios: una buena estrategia para promover el uso de los medios de pago electrónicos.
- [iii] Estatuto Tributario Nacional. Art. 771-5 Medios de pago para efectos de la aceptación de costos, deducciones, pasivos e impuestos descontables.

4. EUROPEAN UNION



In January 2017, the European Commission introduced an Inception Impact Assessment for the Proposal for an EU initiative on restrictions on payments in cash. The proposal would establish cash payment caps across the European Union for AML-CFT purposes.

Some European countries already have cash payment limits the highest being Czech Republic 12,700 euros and lowest being Denmark 1,300 euros. France, Turkey, Greece, Italy, Sweden, Norway, and the Netherlands also have cash payment caps and legally require merchants to issue receipts for each transaction. They also allowed merchants to refuse payment in cash to compel the use of cards at the POS.

References:

- [i] European Commission (2017). Inception Impact Assessment: Proposal for an EU initiative on restrictions on payments in cash. .
- [ii] Beretta, E. (2014). The Irreplaceability of Cash and Recent Limitations on its Use: Why Europe is Off the Track. *International cash conference on 'The usage, costs and benefits of cash revisited' Deutsche Bundesbank.*
- [iii] Sung, M. J., R. Awasthi, and H. C. Lee. 2017. Can Tax Incentives for Electronic Payments Reduce the Shadow Economy? Korea's Attempt to Reduce Underreporting in Retail Businesses. *Policy Research Working Papers: 7936.*

5. GREECE



The Greek authorities capped cash transactions to no more than 1,500 euros since 2011. Additionally, in June 2015, Greek authorities restricted the amount that could be withdrawn from banks to 420 euros a week to halt capital flights in the midst of the crisis. An unintended positive consequence was a sharp rise in electronic transactions. According to Reuters, in the second half of 2015, 1.8 million debit cards were issued (in a population of 11 million), POS installation raised by 15 percent. According to the New York Times, the change was immediate – in the first week after capital controls supermarkets were seeing 90 percent of their transaction through cards, versus 10 to 14 percent before the controls. The restriction was eased in September 2017, with the cap on withdrawals increasing to 1,800 euros per calendar month.

Additionally, a law mandating card acceptance for firms was issued in December 2015 and sole proprietors were added as of July 2017. The law also outlined consumer incentives to use electronic payments such as public lottery and tax deductions.

References:

- [i] Daley, S., December 4, 2015. In Greece, Shift From Cash to Plastic Could Undercut Shadow Economy. *The New York Times.*
- [ii] Georgiopoulos, G., May 12, 2016. Greece capital controls have silver lining: more tax revenues. *Reuters.*
- [iii] European Payments Council. September 21, 2017. Greece's progress towards a 'less cash' society: An interview with Vassilis Panagiotidis, Hellenic Bank Association.

6. INDIA



In November 2016, the Government of India announced the demonetization of all Rs 500 (7.80 USD) and Rs 1,000 (16 USD) banknotes. The main purpose was to reduce the shadow economy and to crack down on the use of illicit and counterfeit cash to fund illegal activities and terrorism. Cash in circulation fell by two-thirds after the demonetization. By March 2016 digital transactions had grown by 33% in volume and 59% in value (however this calculation is not adjusted for seasonality).

Following the 2016 demonetization, the Reserve Bank of India (RBI) capped the Merchant Discount Rate (MDR) to 0.25 or 0.5 percent of the transaction depending on the value. However, starting on 2018, MDR charges caps were scheduled to increase to 0.40 percent for small merchants and 0.90 for all merchants for swipe transactions,

and 0.3 and 0.8 percent respectively for transactions via QR code. In order to continue supporting a cash-less economy, starting on January 1st 2018 the Government will subsidize the MDR on transactions made through debit cards, UPI and Aadhaar-enabled payment systems on transactions up to Rs 2,000 (~31.2 USD) for the next two years.

In parallel, two lotteries targeting consumers and merchants were implemented by the National Payment Corporation of India (NPCI) in 2016 to incentivize electronic payment use and acceptance:

- Lucky Grahak Yojana—Daily and weekly lottery among consumers with transactions of Rs 50 to Rs 3,000 (~0.78 to 47 USD) with rewards up to Rs 1 Lakh (~1,566 USD).

- Digi-Dhan Vyapar Yojana—Lottery for merchants accepting digital transactions with weekly rewards up to Rs 50,000 (~783 USD).

On the private sector side, several startups have been disrupting the Indian market for electronic payments acceptance. One such startup is ftcash, a mobile-based payment and lending platform with an onboarding record time of 5 minutes for merchants to join. Ftcash allows clients to choose how to settle their payment: the merchant can send them a text with a link; the client can check out in its mobile app; or they can scan a QR code. Using the payment data trends, ftcash also offers loans to merchants through an undisclosed financial partner. The platform acquired 25,000 merchants in their first 18 months.

References:

- [i] Creehan, S. (2017). Demonetization is Catalyzing Digital Payments Growth in India. *Federal Reserve Bank of San Francisco, Pacific Exchange Blog*.
- [ii] Bloomberg Quint. December 16, 2017. Government to Bear MDR on Debit Card Payments up to Rs 2,000 for Two Years.
- [iii] Business Standard. December 15, 2016. Niti Ayog announces incentive schemes to boost digital payments.
- [iv] Press Information Bureau, Government of India (2016). Incentivizing Digital Payments.
- [v] Shah, A., et al. (2016). Digital Payments 2020: The Making of a \$500 Billion Ecosystem in India. The Boston Consulting Group and Google.
- [vi] Chakravorti, B. February 3, 2017. The less cash budget: Proposals add up to a series of mutually reinforcing moves to build a digital payments ecosystem. *The Indian Express*.
- [vii] Mastercard Blog, September 1, 2017. Fridays With Fintechs: Enabling India to Transact Digitally.

7. INDONESIA



In 2011, Indonesia launched an acceptance development fund through an agreement among institutions and with Visa. Contributions were made both by the institutions and Visa, proportional to payment volumes. The fund created over 20 EPA programs under four main pillars: i) Geographic expansion with programs aiming to incentivize POS adoption among new merchants in Tier 2 cities; ii) New acceptance channels with programs promoting emerging channels including eCommerce, mCommerce, mPos and contactless; iii) Segment development aiming to broaden acceptance through programs targeting spe-

cific merchant segments; and, iv) Quality assurance, with programs aiming to improve acquiring industry practices and sophistication.

According to Visa, the program has been highly successful, with the deployment of 88,000 new POS terminals and expansion in new channels spurring a 30-percent acceleration in payment volume growth.

References:

- [i] Govil, S. (2016). Perspectives on Accelerating Global Payment Acceptance. *Visa*.

8. JAPAN



In 2017, the Japanese government set a target to reach a ratio of cashless payments to private final consumption expenditures of 40 percent by 2025. As part of a “Cashless Vision” published by the Ministry of Economy, Trade and Investment in 2018, a Commission for the Promotion of Cashless Settlements will bring together the industry, academia and government sectors to collaborate in advancing efforts towards the goal. One of their first activities was the standardization of QR code payments.

A two-percentage point consumer sales tax increase was introduced in October 2019 and to ensure this didn't affect consumption the Japanese government bet on mobile payments. The government set up a nine-month program to offer points redeemable for future discounts to shoppers who use QR codes and other cashless payments. The program provides subsidies to installing

cashless-payment equipment and 5 percent rebates for the consumers making cashless purchases at registered businesses.

The cashless payments reward program was allocated a budget of 280 billion yen (~2.6 billion USD) for the first six months. There are approximately 2 million eligible small and medium-sized businesses in the country to receive the cashless payment terminal subsidies. By November 21, 2019, approximately 39% of these (770,000 retailers) had used the subsidy to install cashless payment terminals. Furthermore, from October 1 to November 4 the daily rebates averaged 1.2 billion yen. According to Bloomberg calculations, at this pace, the budget allocated for rebates would run out by February. The Government might be planning to extend the program as part of a stimulus package. The IMF has underlined the importance of extending consumption

tax countermeasures in 2020, including the cashless payment reward program.

- [i] JapanGov (2018). Abenomics: For future growth, for future generations, and for future Japan.
- [ii] Nohara, Y. and Urabe, E., November 26, 2019. Japan Cashless Incentives Could Be Extended as Part of Stimulus. *Bloomberg*.

- [iii] White, S., July 2, 2019. Hoping to boost spending, Japan tries to sell shoppers on cashless purchases. *Reuters*.
- [iv] IMF, November 25, 2019. Japan: Staff Concluding Statement of the 2019 Article IV Mission.

9. KAZAKHSTAN



According to Article 39 of the Law of the Republic of Kazakhstan on Payments and Payment Systems, all individual entrepreneurs operating under the “patent” or “simplified tax regime” had to install and use POS-terminals to by January 2014. The enforcement was postponed several times up to January 2016. Exemptions apply to entities operating in the trade of agricultural products and aquaculture; entities trading from mobile shops, stalls, kiosks, containers; and people working in areas that lack public telecommunications networks.

References:

- [i] Kaz TAG, February 26, 2014. Vice Minister of Finance Ruslan Dalenov: Tax Receipts are Growing in Kazakhstan Along with Arrears.
- [ii] Kazakhstan e-gov, Public Services and Information Online. The use of equipment (device) intended for accepting payments using payment cards (POS-terminal).

10. KENYA



Kopo Kopo is a start-up that started operations in 2012 in Kenya offering electronic payments acceptance platform to merchants. Kopo Kopo saw a business opportunity in a growing mobile money service adoption: by 2011, M-PESA had nearly 70% of Kenya’s adult population registered and yet merchant electronic payment acceptance remained extremely low. A year after launching, Safaricom launched its own merchant payment acceptance platform called Lipa Na M-PESA. This forced Kopo Kopo to further innovate and differentiate itself. Kopo Kopo started offering value-added services targeting merchant pain points such as business intelligence and targeted SMS marketing. However, their biggest innovation was using predictive analytics on payment processing and customer relationship data to offer a cash-advance product called Grow. The loan decisions are made almost immediately and repayment is ensured through direct deductions to the merchant’s cash flows. By 2015, Grow had approximately a thousand merchants and had disbursed \$3 million in loans.

In 2017, Kopo Kopo partnered with Mastercard to offer Masterpass QR across 11 markets in Sub-Saharan Africa. In Kenya, the Masterpass QR is being offered to Diamond Trust Bank clients who wish to pay at Kopo Kopo acquired businesses. Masterpass QR enables the clients to scan with their smartphones a merchant-specific QR code to complete the payments at checkout. The solution eliminates the need to invest in POS devices Mastercard anticipated reaching 150,000 MSMEs in Kenya on their first year.

References:

- [i] Mastercard Press Release, July 7, 2017. DTB and Mastercard Partner to Enhance Digital Payments in Kenya.
- [ii] World Bank Group and World Economic Forum. (2016). Innovation in Electronic Payment Adoption: The case of small retailers.



11. MALAYSIA

Bank Negara Malaysia (BNM) developed a comprehensive plan to promote the use of electronic payments in the country. BNM's Financial Sector Blueprint (2011-2020) set the direction for the transformation of the country's payment landscape. A National Payments Advisory Council was instrumental in the design of the strategy. In 2015, the NPAC became more inclusive by incorporating a Service Provider Consultative Group and a User Consultative Group.

The strategy focused on two key instruments: (i) electronic fund transfers to displace cheque, and (ii) debit cards to displace cash. For the latter, in December 2014, BNM issued the Payment Card Reform Framework (PCRF) to promote payment card use through a set of actions including objective and transparent mechanism for setting interchange fees. Five focus areas determined the measures undertaken.

Within this framework, operators of payment card networks are given the option to establish a Market Development Fund (MDF) to manage an additional 0.1% interchange fee over credit card transactions which is allowed only in networks with MDF. These additional funds are managed by the network operators with the purpose of funding the deployment of POS terminals by the participants in the payment card network of said operator. Funds are made available to issuers who are able to cover

TABLE 3. Malaysia: Payment card reform framework focus areas

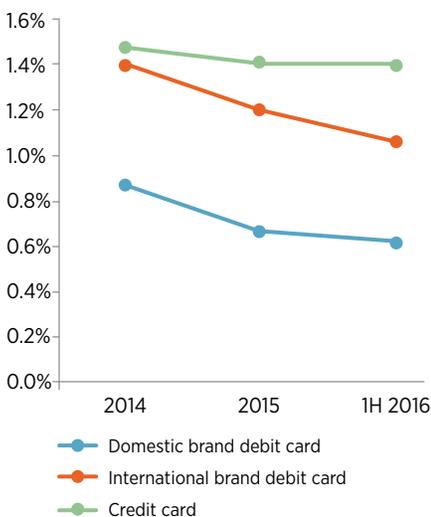
Focus areas	Measures undertaken
1. Price signal	<ul style="list-style-type: none"> Reduced Interchange Fee (IF)¹ for Debit Card Fostering a competitive payment card market <ul style="list-style-type: none"> Differentiated Merchant Discount Rates (MDRs)² Disclosure of MDR and IF rates to merchants Empowering merchants to choose the lower cost debit network
2. Quality and value proposition	<ul style="list-style-type: none"> Migration from signature to PIN verification for added security Adoption of contactless functionality for greater convenience
3. Access points	<ul style="list-style-type: none"> 44 mil ATM cards which double up as debit cards 800,000 POS terminals by 2020 (25 terminals per 1,000 inhabitants)
4. Market incentive structure	<ul style="list-style-type: none"> Market Development Fund (MDF) to fund the expansion of POS terminal network
5. Awareness and confidence	<ul style="list-style-type: none"> E-payments roadshow and township campaigns Strengthening security requirements

1. Interchange fee is an interbank fee payable between banks in a payment card transaction and is priced into the merchant fee (MDR) paid by card-accepting merchant to the merchant's bank.

2. MDR is the merchant fee paid by a card-accepting merchant to the merchant's bank for every payment card transaction.

Source: Bank Negara Malaysia.

FIGURE 10.1 Average MDR by card type



Source: Bank Negara Malaysia

FIGURE 10.2 Number of POS terminals

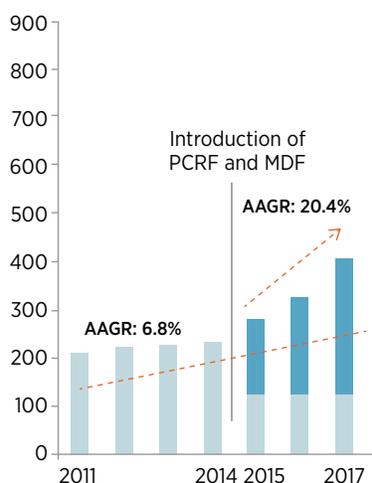
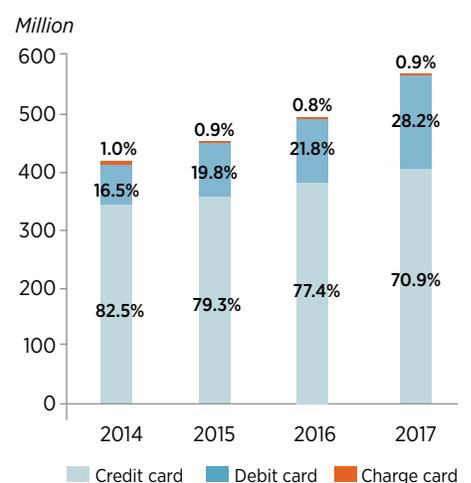


FIGURE 10.3 Transaction volume of payment cards



the shortfall in POS terminal deployment. The MDF specific rules on how the funds are spent may be determined by the operator with approval of BNM.

According to BNM, two major payment card schemes have established the MDF, which is expected to channel approximately RM 455 million (-115 million USD) to increase the number of POS terminals from 240 thousand in 2014 to 800 thousand by 2020.

The data suggest there have been a positive policy impact in POS terminals and debit card transactions. By

2017. The average MDR had been decreasing for all card types. The average annual POS terminal growth tripled from 6.8% (2011–2014) to 20.4% (2015–2017). Debit card transactions have been growing at record rates and by 2017 represented 28% of total payment card transactions.

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12. MEXICO



In 2004, a presidential decree established FIMPE, a private trust fund to expand usage of electronic payment channels. Acquirers were free to opt-in and invest in this fund for a joint program to promote POS installation and use of digital payments. FIMPE was funded through acquirer contributions which were returned as fiscal exemptions. The resulting program had two main parts:

- i. Demand generation (Boletazo): Lotteries were organized awarding cars to payment card users (more than 3,100 cars were awarded). According to FIMPE, transactions at POS increased 167% from 2003 to 2006 and 1 out of 5 surveyed said they increased their card usage.
- ii. Supply generation: Through the trust fund, free POS were installed in merchants who did not have a POS machine and they were also offered a fixed monthly merchant fee up to certain transaction volume. The program also comprised national media campaign targeted to merchants on the benefits of payment card acceptance. According to FIMPE, the POS network increased 96.3% from 2003 to 2006.

According to an IDB report, under FIMPE, 205 thousand POS were installed for free to the merchants who usually had to pay 6,000–7,000 MXN (-322–376 USD). According to Banco de Mexico, POS transactions increased on average by 24% per year between 2005 and 2008; and stalled after FIMPE ended rising only 0.2% in 2009.

In 2016, the Mexican Banker's Association, switches, card brands, and the Banking Supervisor (CNBV) came together to create a strategy to promote electronic payment acceptance. The group first completed a thorough analysis of the market to identify barriers and opportunities, as well as international best practices. Based on the analysis, they came up with a detailed action plan which included improving the regulatory framework, simplifying the fiscal requirements, awareness campaigns, and enabling innovative business models.

More recently, the Finance Ministry (SHCP) through the program "Tablet para el Regimen de Incorporación Fiscal" offered a subsidized tablet equipped with mPOS and

accounting software for microenterprises registering for tax purposes.

Regarding restriction on deductibles, according to Article 27 in the Income Tax Law (Ley de Impuesto sobre la Renta), allowable deductions of a company's expenditures must be backed by a digital tax receipt issued (CFDI), and payments exceeding 2,000 pesos (-107 USD) must be made through electronic transfer of funds, by personal check or credit, debit, or service cards, or using an electronic pocketbook to be deductible. Starting in 2004, in the case of gas purchases, regardless of the amount, the transaction must also be paid by electronic means to be deductible.

In terms of cash payment caps, starting in 2014, according to article 55 of the Income Tax Law, financial sector institutions must report cash deposits made to taxpayers' accounts when the accumulated monthly amount of cash deposits exceeds 15,000 pesos (-806 USD). Furthermore, Banco de Mexico issued a ceiling for checks payable to the bearer at 5,000 pesos (~ 268 USD).

The private sector in Mexico has also incentivized electronic payment acceptance through innovative products and business models. One of the earliest examples of this was Blue Label/ Red Quibo, a joint venture between Grupo Bimbo (one of the biggest corner store suppliers in Mexico) and Blue Label Technologies (a payments processing firm). They initially installed POS solutions for corner stores to enable top-up for mobile phones and bill payment, with no payment acceptance feature. A couple of years later they incorporated payment acceptance into their solution. While Banamex, one of the biggest banks, acts as acquirer, Blue Label acts as the payment aggregator acquiring small retailers and aggregating the transactions on the bank's behalf. By 2015, two years after starting operations, Blue Label had onboarded 75 thousand retailers. By using Bimbo's established network and trustworthy reputation with corner stores, the network has been able to grow steadily.

Another such example is iZettle, which enabled by the payment aggregator regulation in Mexico, offers electronic payment acceptance to merchants without a

minimum number of transactions, with a simple pricing scheme, and a simplified sign-up process that requires less than 20 minutes.

References:

- [i] Borrero, U., L. Fajury, B. Marulanda, and M. Paredes (2017). *Sistemas de pago e inclusión financiera en América Latina: Cómo promover avances desde normativas propicias y buenas prácticas*. Inter American Development Bank.
- [ii] CPSS Red Book (2011). *Payment, clearing and settlement systems in Mexico*. CPSS, BIS.
- [iii] Crezcamos Juntos Afiliate. *Tablet para el Regimen de Incorporacion Fiscal*.
- [iv] FIMPE (2003). *Presentation available upon request*.
- [v] Visa (2017). *Maximizing the Impact of Financial Inclusion: Merchant-Centered Design and the Last Mile in China*.
- [vi] World Bank Group and World Economic Forum. (2016). *Innovation in Electronic Payment Adoption: The case of small retailers*.
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13. NETHERLANDS



In 2002, the Ministry of Finance established the National Forum on the Payments System to further promote the general safety and efficiency of the payment system in the Netherlands. In this forum, the government, acquirers, switches, issuers, and card brands came together to determine the objectives and an action plan to reduce cash use and promote electronic payments. While not direct members, merchants and consumers were also consulted when establishing the agenda. The actions included creating card-only cashiers at all grocery stores, rewards and lotteries for consumers and merchants (and their employees). Other initiatives included shopping centers that were 100% debit card areas. The percentage of private consumption through cards passed from 40% in 2003 to 59% in 2015.

In 2007, as part of this initiative, banks and retailers launched together a public campaign to increase debit card use. In an empirical study conducted by De Nederlandsche Bank (2017), the authors found evidence of the media campaign leading to increased debit card usage by consumers. The biggest effect was among those who already used debit cards, which after the media campaign were using their debit cards in new situations. The found no difference in effect between different campaign slogans.

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14. NIGERIA



“Cashless Nigeria”, a comprehensive policy to promote digital payments, was issued in Nigeria in 2012. The policy was first piloted in Lagos State, and then it was scaled up nation-wide. The policy included:

- Information campaign on benefits of digital payments;
- POS guidelines and restrictions of cash-in-transit services;
- Cash handling charges on daily cash withdrawals or deposits that exceed approximately 3,000 USD for individuals and 18,000 USD for corporate bodies. The fees on excess withdrawals were as high as 5 percent for corporate bodies and 3 percent for individuals, while for deposits they were 3 and 2 percent respectively. The fee was collected by banks with a percentage going to the Central Bank. While the policy specified a cash cap in practice it worked more as an additional direct cost to cash for users.

According to a case study by Better than Cash Alliance (BTCA), after two years of implementation the conclusion was that a mind shift for corporates had happened. There was not a question on whether to change or not to digital anymore but rather on how to make the switch. The Nigerian Government has led by example with 61 percent (by value) of their salaries and social subsidies being paid electronically, and all pension, supplier, and state and municipal payments being done electronically. However, progress at the individual level seems to have been slower—according to a BTCA country diagnostic, by 2013 only 1 percent of P2B payments were being made digitally. Yet, a more recent assessment by Quartz indicates a likely positive impact with POS transaction volume from January to November 2016 being 65 percent higher than the volume for all 2015.

Additionally, in 2014, the Electronic Payments Incentive Scheme and Awareness Campaign was introduced.

The scheme included incentives for merchants (reduction of merchant fee to maximum 0.75% transaction value with a ceiling of NGN1,200, Commission on Turnover exemption, rewards based on mystery shopping and promotion of cash back functionality on POS) and costumers (point based reward system based on frequency of card usage, cash refund based on card usage, promotional gifts).

References:

- [i] Loeb, B. (2015). The response of large corporates and their value chains to government policies to shift to digital payments: Nigeria’s “Cashless” policy. BTCA.
- [ii] Dermish, A. (2015). Country Diagnostic: Nigeria. BTCA
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15. SOUTH KOREA



In 1999, South Korea introduced the Tax Incentive for Electronically Traceable Payments (TIETP) to promote payments with credit cards, debit cards, and electronic cash receipts. TIETP offered tax deductions from taxable labor income, with a minimum and ceiling deductible amount. Until 2002, the deduction rate was 10 percent of electronically traceable payments, including credit card or debit card payments, up to a ceiling of three million won or 10 percent of total labor income. The deduction rate and ceiling have been revised several times since, reaching 30% deduction rate for some years.

Similarly, merchants who accept electronic payments have VAT deductions (and had income tax deductions up to 2011). The VAT deduction ratio has varied through time. In 1994, the Ministry of Finance introduced a 0.5 percent credit card sale VAT tax credit. It increased to 1% in 1996 and then introduced 3 M won ceiling in 1999. It then increased to 2 percent in 2000 with 5 million won ceiling.

The South Korean Government also introduced a credit card lottery system in which the last Saturday of each month a credit card invoice stub would be randomly chosen as the winner. Both the customer and the merchant of the selected invoice stub won a monetary prize.

In 2001, card acceptance was mandated for all VAT-paying businesses in the country, and in 2002 they imposed fines for card refusal.

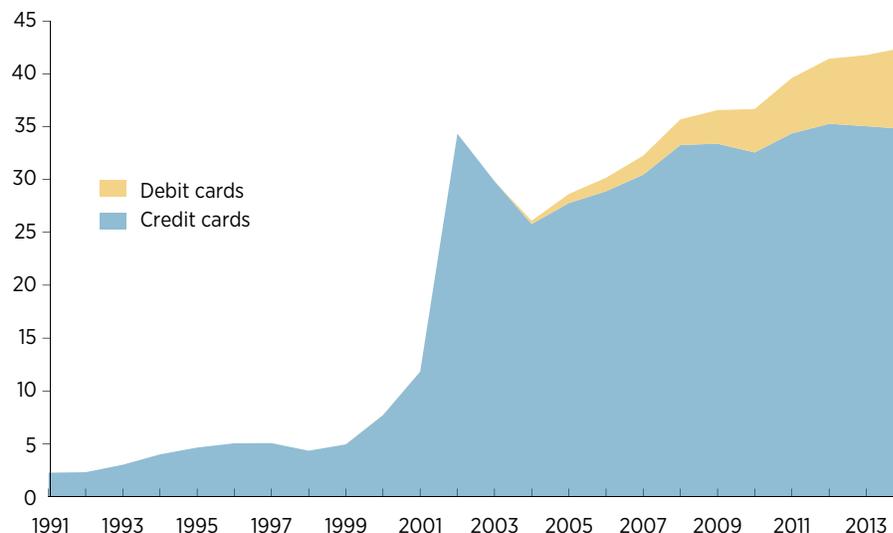
According to a World Bank Working Paper, the incentive had a positive impact on reducing the shadow economy and on income redistribution. Furthermore, credit card transaction value increased sharply after the tax incentive program, from 4.9 percent of GDP in 1999 to 34.3 percent in

2002. In 2003, the deduction rate for debit cards was set at a higher level than credit cards, and their use started to rise sharply.

References:

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- [ii] Dybka, P. et al. (2017). Reducing the Shadow Economy through Electronic Payments. MasterCard and EY.
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FIGURE 11. Credit, debit, and prepaid card transactions as percentage of GDP



Source: Sung et al. (2017).

Notes: Debit card payments include check cards. Electronically traceable cash receipt payments are not included. Payments by all consumers, including not only wage and salary income earners but also self-employed businesses.



16. URUGUAY

Uruguay has implemented a series of fiscal incentives to promote electronic payment acceptance in the last decade (Figure 12). Preliminary results suggest the incentives have successfully increased debit card transactions and electronic payment acceptance.

In 2014, Uruguay issued a Financial Inclusion Law as the culmination of several government efforts to promote financial inclusion. As part of this Law and subsequent decrees, VAT reductions were extended to all electronic payments under a specific VAT reduction schedule (Figure 13). Additionally, the Law created the figure of *Emisores de Dinero Electronico* (electronic money issuers) allowing non-banks to enter the issuing market; interchange fees were regulated; a mandate for payroll to be executed through electronic means was issued; and, cash transactions over US\$5000 were prohibited. Investments in POS expansion were also encouraged through income tax exemptions; merchants can claim an income tax exemption of up to 80% of the value of the POS investment.

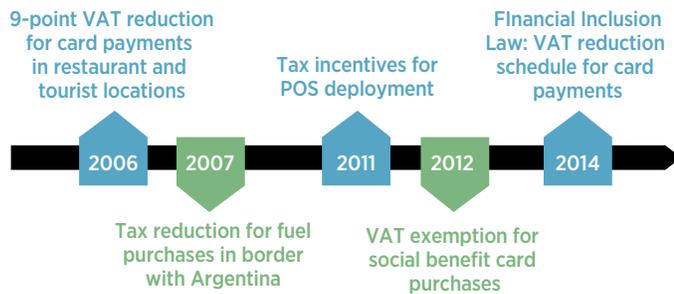
According to a study by CPA Ferrere (2016), fiscal incentives have had a strong impact on debit card use; debit card transactions in POS have passed from 5.6 million in 2013 to 35.3 million in 2015. The intensity of debit card usage also increased, from representing 7.1% of all

card transactions by the end of 2013, to representing 29.4% by the end of 2015.

According to CPA Ferrere, 71% of the POS transaction increase is due to an increase in debit card issuance and activation, while 29% is due to an increase in use intensity. Furthermore, debit card transactions increased their share of total payment instrument transactions, at the expense of credit card transactions and cheques (Figure 15).

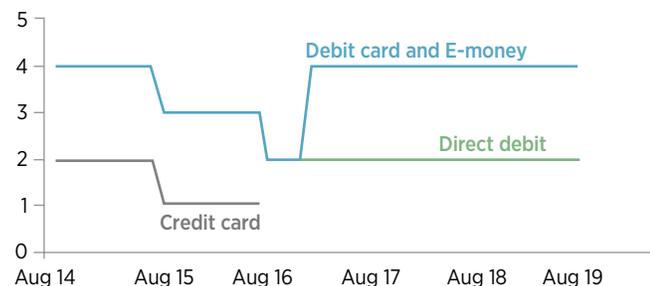
On the other hand, according to CPA Ferrere (2016), the trend for credit card transactions didn't seem to change as a result of the fiscal incentives. This could imply the targeted bigger fiscal incentives for debit card transactions might have been the key incentive behind debit card growth.¹

FIGURE 12. Fiscal incentives timeline



Source: Issued regulations.

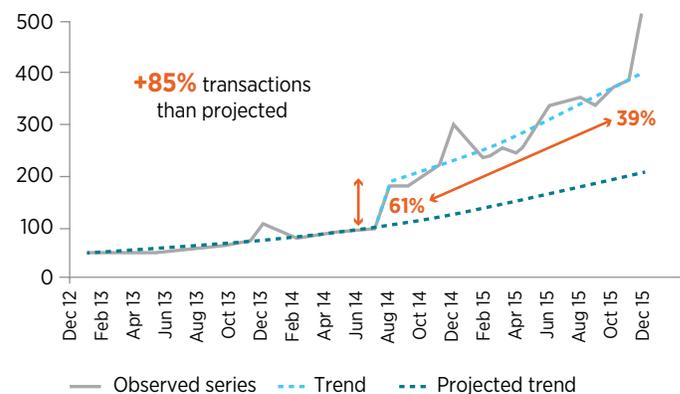
FIGURE 13. VAT reduction scheme



Source: Issued regulations.

FIGURE 14. Local debit card POS transactions

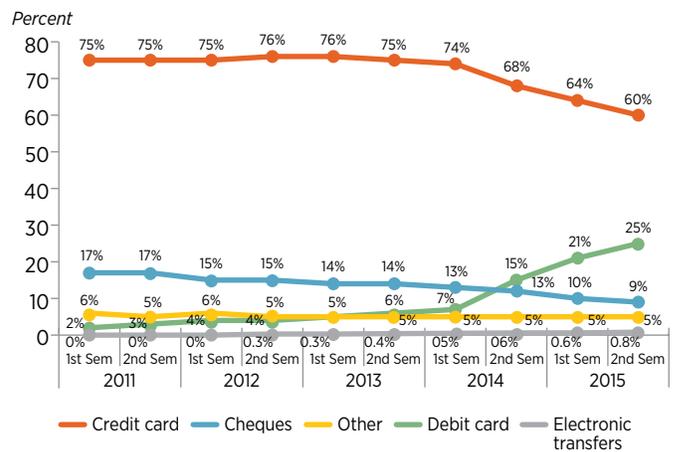
(index July 2014=100)



Source: CPA Ferrere (2016).

FIGURE 15. Payment instrument share

(number of transactions)



Source: CPA Ferrere (2016).

POS terminals grew by 38 percent from 2013 to 2016, according to data published by the Central Bank of Uruguay. The package of electronic payment acceptance incentives didn't only increase the number of card transactions, but also likely contributed to the formalization of small merchants. According to CPA Ferrere (2016) POS terminals increased most among small merchants and in merchant categories where cash is usually king, such as restaurants and supermarkets, therefore contributing to reducing the shadow economy.

17. UNITED STATES

Square is a US-based company that disrupted the electronic payment acceptance market by introducing its mPOS (mobile point of sale) in 2010. The company didn't only simplify the hardware requirements to accept electronic payments through a "dongle" attached to the user's mobile phone, but they also made the set-up process paperless and efficient through online registration and mailed dongles.

The years following its introduction, Square's successful business model attracted other players to the market offering similar mPOS and services. Faced with competition, Square started providing value-added services to differentiate itself. This includes user business analytics insights generated from the electronic payments, allowing

References:

- [i] Govil, S. (2016). Perspectives on Accelerating Global Payment Acceptance. Visa.
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Note

1. While implied, this causality cannot be confirmed with the analysis presented in CPA Ferrere, 2016.



businesses to look at sales trends and product popularity. Square also offers inventory management, employee management, payroll services, customer relationship management (e.g. marketing, promotions, loyalty programs) and instant, unsecured credit lines through their sister business Square Capital.

References:

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