Third World Quarterly ›
Volume 30, 2009 - Issue 7

Articles

Mobile Phones and Financial Services in Developing Countries: a review of concepts, methods, issues, evidence and future research directions

Richard Duncombe & Richard Boateng

Pages 1237-1258 | Published online: 12 Oct 2009

Cite this article https://doi.org/10.1080/01436590903134882

Abstra

Researc untries has
undergo standing of
the c cles. A
frame lifecycle
model th review finds
that rese t, providing
valuable ut, as a
consequ ssessing
financial eglected,
while ap on. This
paper suggests a future direction for research and practice within the mainstream of

micro-financial services and finance for the poor, correcting this imbalance, and contributing towards the mobiles-in-development-research agenda.

Notes

1 Consultative Group to Assist the Poor (CGAP), Banking on Mobiles: Why, How, for Whom?, Focus Note 48, Washington, DC: CGAP, 2008, at http://www.cgap.org, accessed 6 August 2008 [10].

2 The most recent International Telecommunication Union (ITU) data show that in the case of the poorest continent—Africa—mobile penetration for individual countries has increased from an average of 2% of total population in 2000 to an average of 25% in 2007. This impressive growth masks extreme variations between countries, but overall mobile cellular networks have now extended coverage to over 60% of the total African population, creating network access potential for previously un-served communities in some of the poorest countries. Many sub-Saharan African countries with a GDP per capita of less than US$500 (in 2007) are fast approaching near universal mobile network coverage. For example, Ghana stands at 68%, Rwanda at 80%, Sierra Leone at 70% and Uga abase, Geneva: /ITU-D/icteye

3 J Donn omplements or subst 29 June 2007, at

4 Se allenges', Manag Ondrus & A Zmijews ture review', Electron

5 Donne o: 1) store value in out of the stored v e located locally in a kiosk, and 3) transfer the stored value between accounts of individual

account holders by means of text message or menu-driven commands and PIN numbers. J Donner & CA Tellez, 'Mobile banking and economic development: linking adoption, impact and use', pre-publication draft for Asian Journal of Communication, at http://www.jonathandonner.com/donner_tellez_mbanking_use.pdf, accessed 20 September 2008 [17].

6 Porteous defines 'mobile payments' as financial transactions undertaken using mobile devices such as a mobile phone. Mobile banking (m-banking) includes m-payments but involves access by mobile devices to the broader range of banking services, such as account-based savings or transaction products offered by banks. M-payments and m-banking are themselves subsets of the broader domains of e-payments and e-banking respectively. D Porteous, The Enabling Environment for Mobile Banking in Africa, report commissioned by the UK Department for International Development (DFID), Somerville, MA: Bankable Frontier Associates, July 2006, p 3, at http://www.bankablefrontier.com, accessed 4 April 2008 [31].

7 Research carried out by James & Versteeg distinguishes between mobile phone subscribers, owners and users and points to some of the methodological problems of defining access to mobile phone services, and the difficulties in relying on data from published sources (eg the ITU) that define mobile phone penetration according to the number of subscriptions per head of population. J James & M Versteeg, 'Mobile phones in Africa [illegible]07, pp 117–126.

8 Based [illegible]formation and Com[illegible]ssue), 3 (3), 2006, pp[illegible]ugust 2008.

9 Search[illegible]eg mobile netw[illegible]ncial service[illegible]ked with the develop[illegible]ked).

10 On-li[illegible]from within the soci[illegible] banking and fina[illegible]ell as more specialis[illegible]ains: computer science, informatics, information systems and information and

communication technologies for development (ICT4D). Databases searched were: ABI-Inform (ProQuest), EBSCO Business Source Premier, Emerald Fulltext and Science Direct, as well as more general searches using both Google and Google Scholar. Additionally, a number of websites specialising in the dissemination of research concerning mobile phones and development were searched (kiwanja.net/ dgroups.org/; mobileactive.org).

11 S Batchelor, N Scott & S Hearn, Senegal Household Survey M-Payments Analysis: Transformational M-Payments, in Association with DFID—Catalysing access to ICTs in Africa, London: Gamos, 2007, at http://www.gamos.org.uk, accessed 2 February 2008 [4].

12 N Hughes & S Lonie, 'M-PESA: mobile money for the "unbanked": turning cellphones into 24-hour tellers in Kenya', Innovations: Technology, Governance, Globalization, 2 (1–2), 2007, pp 63–81 [19].

13 S Aminuzzaman, H Baldersheim & I Jamil, 'Talking back: empowerment and mobile phones in rural Bangladesh—a study of the village pay phone of the Grameen Bank', Contemporary South Asia, 12 (3), pp 327–348 [1].

14 CGAP, Use of Agents in Branchless Banking for the Poor: Rewards, Risks and Regulation, Focus Note 38, Washington, DC: CGAP, 2006, at http://www.cgap.org, accessed 3 April 2008 [8]; and Porteous (The enabling environment for mobile banking in Africa
g: Mobile Phones a
Washing
8 [9]; and CGAP, Bar

15 Hugh
of M-PESA, Vodafon
national Poter
at http:/
Kapoor, J Morduch
ssion: M-PESA', Inn
[24].

16 InfoD
ks: An InfoDev
nfodev.org, accesse
om under

the mattress to the mobile phone', in Coyle, The Transformational Potential of m-Transactions[42].

17 G Ivatury & M Pickens, Mobile Phone Banking and Low Income Customers: Evidence from South Africa, Washington, DC: CGAP, World Bank and United Nations Foundation, 2006, at http://www.cgap.org, accessed 4 April 2008 [21].

18 M Knight-John, A Zaindeen & S Khan, 'An investigation of the replicability of a microfinance approach to extending telecommunications access to marginal customers', Discussion Paper WDR0506, Version 3.1, World Dialogue on Regulation of Network Economies, 2005, at http://www.regulateonline.org, accessed 12 May 2008 [25].

19 EC Jimenez & PB Roman, 'Electronic banking: delivering microfinance services to the poor in the Philippines', Banking with the Poor Network, Singapore, 2005, at http://www.bwtp.org/pdfs/arcm/Jimenez.pdf, accessed 20 April 2008 [22].

20 I Brown, Z Cajee, D Davies & S Stroebel, 'Cell phone banking: predictors of adoption in South Africa—an exploratory study', International Journal of Information Management, 23, 2003, pp 381–394 [7].

21 UNCTAD,'E-banking and e-payments: implications for developing and transitional economi Technology for Deve ch 5 [39].

22 G Co le: Equity's mobile b ssed 3 April 2008 [14

23 A Bay n Bank villag 261–272 [5].

24 J Goo he Transfor 6, 2007, section 4 008 [18].

25 See, oratory field research http://www.janchipchase.com/sharedphoneuse, accessed 6 April 2008 [12].

26 Ivatury & Pickens, Mobile Phone Banking and Low Income Customers.

27 For a more detailed description of this categorisation of approaches to ICT4D research, see Heeks, 'Theorizing ICT4D research'.

28 Y Au & RJ Kauffman, 'The economics of mobile payments: understanding stakeholder issues for an emerging financial technology application', Electronic Commerce Research and Applications, 7 (2), 2008, pp 141–164 [2].

29 Williamson 1985; Prahalad 2005.

30 Knight-John et al, 'An investigation of the replicability of a microfinance approach to extending telecommunications access to marginal customers'.

31 Donner & Tellez, 'Mobile banking and economic development'; and J Benamati & MA Serva, 'Trust and distrust in online banking: their role in developing countries', Information Technology for Development, 13 (2), 2007, pp 161–175 [6].

32 F Shamin, 'The ICT environment, financial sector and economic growth: a cross country analysis', Journal of Economic Studies, 34 (4), 2007, pp 352–370 [37].

33 See K Pousttchi & DG Wiedemann, 'What influences consumers' intention to use mobile payments?', Mobile Communications Working Group, University of Augsburg, 2007, at ...gust 2008 [33]; and ...ment procedu...gs of m-Business... Vienna, 2003, at ...34].

34 Brow...

35 S...fic', Inform... http://w...st 2008 [13]; and S Ka... and different... D Porteous & N Wish...006, at http://w... Bankable Frontiers...ough the Financial System, Somerville, MA: Bankable Frontier Associates, July 2006, at

http://www.bankablefrontier.com, accessed 4 April 2008 [16]; and T Tsiakis & G Sthephanides, 'The concept of security and trust in electronic payments', Computers and Security, 24 (1), pp 10–15 [38].

36 Batchelor et al, Senegal Household Survey M-Payments Analysis; CGAP, Banking on Mobiles; and CGAP, Regulation of Transformational Branchless Banking.

37 Williams & Torma, 'Trust and fidelity'.

38 H Yu, K His & P Kuo, 'Electronic payment systems: an analysis and comparison of types', Technology in Society, 24 (3), 2002, pp 331–347 [43].

39 For a discussion of these issues, see V von Reijswoud, 'Mobile banking—an African perspective', World Dialogue on Regulation for Networked Economies, 2007, at http://www.regulateonline.org/content/view/948/63/, accessed 20 September 2008 [43].

40 D Porteous, Just How Transformational is m-Banking?, Somerville, MA: Bankable Frontier Associates, 2007, at http://www.finmarktrust.org.za/accessfrontier/Documents/transformational_mbanking.pdf, accessed 20 September 2008 [32].

41 Williams & Torma, 'Trust and fidelity'.

42 TS Pa le
informat th
Internati 06), New
York: ACM 25 March
2008 [29

43 This r nto a
broad ncludes a
grow micro-
finance tion systems
as well a for
example Remote
Transact e,
Washing
http://w

44 Aminuzzaman et al, 'Talking back'.

45 KB Saji & A Agarwal, Mobile Payments—Six Issues, Lucknow: Indian Institute of Management, 2006, at http://www.scribd.com/doc/2241323/Mobile-Payment-I-Six-Issues, accessed 8 August 2008 [35]; and Saji & Agarwal, 'Antecedents of business to business m-payment technology adoption', paper presented to the second IIMA conference on 'Research in Marketing', Indian Institute of Management, Ahmedabad, 3–5 January 2007 [36].

46 Hughes & Lonie, 'M-PESA'; and Vaughan, 'Early lessons from the deployment of M-PESA'.

47 Action research is a reflective process of problem solving led by individuals or teams or as part of a 'community of practice' to address issues and solve problems. Action research can also be undertaken by organisations, assisted or guided by professional researchers, with the aim of improving their strategies, practices and knowledge of the environments within which they practise. See, for example, DJ Greenwood & M Levin, Introduction to Action Research: Social Research for Social Change, Thousand Oaks, CA: Sage, 1998.

48 Porteous, Just How Transformational is m-Banking?.

49 JH Cheong, M Park & JH Hwang, 'Mobile payment adoption in Korea: switching from credit cards', paper presented to the 15th International Telecommunication Society—Europe R

http://w

ccessed 11 August 2

50 Donn

rawczynski & G Misc

case of M-PESA in Ke

Workshop, Pretoria,

, accessed 20 Se

51 D Cra

falls', Small Enterpri

electronic payment

of Anthrop

http://w

systems.pdf, accessed

52 Since 2000 there has been an unprecedented growth in the outreach of Brazil's banking system. The most striking has been the huge expansion in ‘correspondent banking outlets’, with 32 000 new outlets created between 2000 and 2004. The correspondent outlets focus mostly on transaction and payment services, including government benefits and payment receipts, as well sale of pre-paid cell phone cards and SIM cards. Correspondent outlets have been particularly successful in reaching poor clients, thanks to the considerable reduction in variable and fixed costs of providing services. See A Kumar, A Nair, A Parsons & E Urdapilleta, ‘Expanding bank outreach through retail partnerships: correspondent banking in Brazil’, World Bank Working Paper 85, Washington, DC: World Bank, 2006.

53 D Balaban, ‘Going mobile with remittances, technology, mobile banking’, Cards & Payments, April 2008, at http://www.cardsandpayments.net, accessed 2 June 2008 [3].

54 S Mendes, E Alampay, E Soriano & C Soriano, ‘The innovative use of mobile applications in the Philippines—lessons for Africa’, Swedish International Development Agency (SIDA), Stockholm, 2007, at http://www.sida.se/publications, accessed 4 April 2008 [27].

55 See, for example, I Matin, D Hulme & S Rutherford, ‘Finance for the poor: from microcredit to microfinancial services’, Journal of International Development, 14, 2002, pp 273–

56 See C ing countrie for Develop

57 Jame

58 The ve range of litera tive and balanced there are gaps in t -reviewed journals ge. Coverag s are underwa h as South Africa ar nly, which

may have excluded ‘grey literature’ and other reports or studies compiled in developing countries that have not been disseminated via established networks.

Related Research Data

Recent applications of economic theory in information Technology research
Source: Decision Support Systems
The Economic Institutions of Capitalism: Firms, Markets, Relations, Contracting.
Source: The Economic Journal
Wider impacts of microfinance institutions: issues and concepts
Source: Journal of International Development
Interaction between the formal and informal financial sectors: The Asian experience
Source: World Development
Past, present and future of mobile payments research: A literature review
Source: Electronic Commerce Research and Applications
Integrated Impact Assessment for Sustainable Development: A Case Study Approach
Source: World Development
The ICT environment, financial sector and economic growth: a cross-country analysis
Source: Journal of Economic Studies
Mobil
Sourc
Infras one
initiat
Sourc
Unde
Sourc
Resea nd
futu
S
The y
adopt
Sourc
Mobil in
India
Sourc
Using
Development

Source: Journal of Community Informatics

Electronic payment systems: an analysis and comparison of types

Source: Technology in Society

Analysis of mobile payment security measures and different standards

Source: Computer Fraud & Security

Networks, distance, and trust: Telecommunications Development and changing trading practices in Ghana

Source: World Development

Designing an architecture for delivering mobile information services to the rural developing world

Source: Unknown Repository

Security protocols over open networks and distributed systems: formal methods for their analysis, design, and verification

Source: Computer Communications

Information and pragmatic value-adding: Language games and information science

Source: Computers and the Humanities

The Digital Provide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector

Source: The Quarterly Journal of Economics

Evaluating digital inclusion projects: a livelihood approach

Source: International Journal of Knowledge and Learning

Factors Influencing the Adoption of Internet Banking

Sourc

A Fra

Sourc

Finan

Sourc

The E

Sourc

User dels

S

In

Sourc

Electr

Sourc

Resea

Theor

Sourc

Theor

Source: Information Technologies and International Development

E-finance: status, innovations, resources and future challenges

Source: Managerial Finance

Linking provided by ScholeXplorer

Related research

People also read | Recommended articles | Cited by 153