Exploring consumer mobile payment adoption in the bottom-of-the-pyramid context: A qualitative study

Article *in* Strategic Change · June 2019

DOI: 10.1002/jsc.2289

CITATION
1

READS
137

3 authors:

Rajibul Hasan
National University of Ireland, Maynooth
65 PUBLICATIONS **271** CITATIONS
SEE PROFILE

Yinggang Liu
Rennes School of Business
1 PUBLICATION **1** CITATION
SEE PROFILE

Philip J. Kitchen
Rennes School of Business
205 PUBLICATIONS **5,740** CITATIONS
SEE PROFILE

DOI: 10.1002/jsc.2289

RESEARCH ARTICLE

WILEY

Exploring consumer mobile payment adoption in the bottom-of-the-pyramid context: A qualitative study

Rajibul Hasan[1] | Yinggang Liu[1] | Philip J. Kitchen[2] | Mizan Rahman[3]

[1]Rennes School of Business, Rennes, France

[2]Salford University, Salford, United Kingdom

[3]University of Lincoln, Lincoln, United Kingdom

Correspondence
Rajibul Hasan, Rennes School of Business, 2, Rue Robert d'Arbrissel—CS 76522, 35065 Rennes Cedex, France.
Email: rajibul.hasan@rennes-sb.com

Abstract

This article investigates the factors influencing mobile payment in China's bottom-of-the-pyramid (BOP) market via in-depth interviews with mobile payment users in several geographic regions in China. This article investigates factors influencing mobile payment adoption in the BOP context. The results show that product bundling, after-sale services, interference from other institutions, perceived corporate integrity, and monopoly and information opaqueness can influence mobile payment adoption in the BOP context. The findings will help practitioners understand and improve mobile payment adoption in the BOP context.

1 | INTRODUCTION

The financial crisis of 2008 has led to lower trust levels among financial institutions' customers. This has created an opportunity for less-regulated, technology-enabled nonbanks to thrive by offering financial services more cheaply and efficiently compared to traditional banks (Saal, Starnes, & Rehermann, 2017).

The recent digital transformation has made it possible for these financial technology (FinTech) companies to offer comfortable tech-based financial solutions, such as mobile payment, and to meet consumer demands with low cost, convenient ways to transfer money and to buy and sell products. As a result, the lost trust is being rebuilt since the financial crisis, and specifically, mobile payment has contributed to this.

Mobile payment not only has rebuilt consumers' trust but also has contributed to the lives of two-thirds of the world population, who earn less than $5 a day (Rangan, Chu, & Petkoski, 2011). According to Prahalad (2005), between 4 and 5 billion people live below the poverty line globally with annual per capita incomes of less than $1,500, and they have been underserved by governments, NGOS, and corporations. Prahalad's (2005) research has drawn attention to these bottom-of-the-pyramid (BOP) segments, located mainly in Africa, Asia, Latin America, and Eastern Europe, subsequently attracting notice from businesses and other establishments who have realized the BOP market is huge and untapped with about $5 trillion in purchasing power parity (Prahalad, 2005).

JEL classification codes: M20, M21, M29, M30, M31.

The BOP market differs from the top-of-the-pyramid (TOP) market because it is often handicapped by lack of electricity, poor infrastructure, political instability, economic restraints (e.g., low GDP and high inflation), low literacy rates, low penetration of formal financial services, low income and financial literacy levels, and underdeveloped technology ecosystems (Hasan, Lowe, & Rahman, 2017; Prahalad, 2005; Rogers, 2003; Saal et al., 2017). These restraints must be considered when conducting business in this market. However, despite these factors, the BOP market is attracting increasing attention from many multinational companies (MNCs).

As the markets of undeveloped countries slowly mature and new products and goods flow into these relatively poor markets, how to attract BOP consumers to buy both traditional and innovative products and how to adapt to their demands have become two important issues for MNCs. Research literature has delved into consumer innovation adoption in developed countries, and even in developing countries, but few studies have focused on BOP consumers. One exception is Nakata and Weidner (2012) who contextualized a BOP (CBOP) model that proposed relevant factors that influence innovation adoption in the BOP context. Thus, investigating drivers of innovation adoption among BOP consumers is a needed focus in marketing research.

Remarkable progress in telecommunications and mobile technology has led to the development of mobile payment services, that is, the electronic transfer of funds by mobile devices (smartphone, tablet, or personal digital assistant) from one party to another either directly or via an intermediary (Mallat & Tuunainen, 2008). This convenient consumer payment mode seems to be becoming a preferred option

and may significantly increase the volume of financial transactions. Since the 2008 financial crisis, consumers' trust in tradition banks has diminished, and this has led to efforts to regain trust in tech-based financial services like mobile payment. Recent research has predicted the gross value of mobile device transactions for products and services will surpass $730 billion by 2017 (Holden, 2012), and for BOP innovation, adoption of mobile payment services is essential. This research explores the factors that can influence mobile payment adoption in the BOP context.

2 | LITERATURE REVIEW

Many companies treat the BOP market as a homogeneous group and expect all BOP consumers to accept generic products (Ramani, SadreGhazi, & Duysters, 2012). However, a BOP market is actually heterogeneous in character. Thus, a one-size-fits-all approach is an obstacle to widespread innovation in the BOP context (Ramani et al., 2012). Therefore, Rangan et al. (2011) have emphasized segmenting the BOP market because of variations in income levels and needs.

2.1 | BOP market and segmentation

Rangan et al. (2011) segmented the BOP into three segments: (a) extreme poverty segment, (b) subsistence segment, and (c) low-income segment. These segments are presented in Figure 1:

2.1.1 | Extreme-poverty segment

People who live on below U.S. $1 a day represent the extreme poverty segment (Rangan et al., 2011). Roughly, 1.6 billion people belong to this segment and find it difficult to meet basic needs, such as sufficient food, clean water, or adequate shelter. Poor health, lack of nutrition, financial vulnerability, limited education, and shortage of marketable skills have barred this group from greater participation in an organized economy. This segment normally does not spend money on technology because they struggle to meet basic utilitarian needs.

2.1.2 | Subsistence segment

People who live on U.S. $1–$3 a day represent the subsistence income segment (Rangan et al., 2011). Roughly, 1.6 billion people belong to this segment, and they spend their meager resources mainly on essential products or services (Rangan et al., 2011). Normally, the income source of this segment consists of day labor or temporary work, and income is by no means steady. BOP consumers in this segment can afford one square meal a day, but its nutritional content is often of a poor standard. This segment borrows money from moneylenders at excessive rates and is vulnerable to exploitation by middlemen.

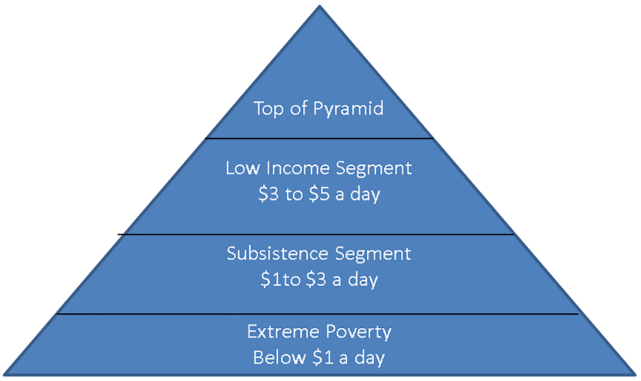

FIGURE 1 BOP segments
Source: Reproduced from Rangan et al. (2011) [Color figure can be viewed at wileyonlinelibrary.com]

2.1.3 | Low-income segment

This group consists of people who live on U.S. $3–$5 a day and represent the low-income segment (Rangan et al., 2011). Roughly, 1.4 billion people belong to this segment, and although still considered poor, they are generating discretionary income (Rangan et al., 2011). BOP consumers in this segment often own consumer goods, such as cell phones, bicycles, and/or television. Consumers strive to become educated and tend to have steady and better-paid work than other BOP counterparts. Therefore, this segment has appropriate housing and access to credit and health care.

The low-income segment and subsistence segment can just afford to use mobile banking; therefore, this research only focuses on these two segments of BOP markets. Previous research on mobile payments have mainly focused upon technical issues, such as mobile payment systems' architecture, security, risk, and trust, and consumer-related issues, such as attitude and adoption. Topics such as social and cultural effects on mobile payments, comparisons of traditional payment and mobile payment services, and business-to-business aspects have been under-researched (Apanasevic, Markendahl, & Arvidsson, 2016). Thus, this research analyzes mobile payment adoption by investigating factors from various domains. In the next section, previous research that has looked at adoption of technologies is considered.

2.2 | Theories related to adoption of technologies

The Technology Acceptance Model (TAM) (Davis, 1989) and the Innovation Diffusion Theory (IDT) (Rogers, 2003) are two innovation adoption theories initially applied to information technology adoption but now are frequently used in mobile payment adoption studies.

Rogers (1962) initially proposed IDT. According to him, the following five characteristics of innovation affect consumer adoption:

1. Relative advantage: the degree to which an innovation is perceived to be better than the traditional version;

2. Compatibility: the degree to which an innovation is perceived to be compatible with potential adopters' existing values, expectations, needs, and past experiences;
3. Complexity: the degree to which an innovation is perceived as difficult or easy to use;
4. Trialability: the degree to which an innovation can be experimented with and tested before adoption; and
5. Observability: the degree to which the use of an innovation can be noted by people who have not yet adopted it.

According to the TAM, the acceptance of new technology is determined by behavioral intention that can be explained by an individual's attitude toward using the technology, which in turn is influenced by two psychological components—perceived usefulness (the degree to which it is believed using a particular system will enhance job performance) and perceived ease of use (the degree to which it is believed using a particular system will be effortless; Phonthanukitithaworn, Sellitto, & Fong, 2016).

The TAM and IDT are considered to be suitable models for studying user intention to adopt new technology. The TAM is more frequently used in studies of mobile services adoption because of its simplicity and ease of applicability (Phonthanukitithaworn et al., 2016).

However, innovation adoption is a complex process influenced by many factors, and in this case, has led researchers to develop extensions of the TAM by combining its constructs with additional factors (Apanasevic et al., 2016). The Unified Theory of Acceptance and Use of Technology Model (UTAUT) is one extension example proposed by Venkatesh, Morris, Davis, and Davis (2003). Their model integrates theories from eight models: (a) the theory of reasoned action, (b) the technology acceptance model, (c) the motivational model, (d) the theory of planned behavior, (e) a model combining the technology acceptance model and the theory of planned behavior, (f) the model of PC utilization, (g) the innovation diffusion theory, and (h) the social cognitive theory. It was used to empirically test data from four organizations over a six-month period, and it confirmed the findings with data from two new organizations with similar results (Venkatesh et al., 2003). The UTAUT model comprises four core determinants (performance expectancy, effort expectancy, social influence, and facilitating conditions) of intention and usage and four moderators (voluntariness, experience, age, and gender) of key relationships. The definitions of some of these constructs are:

1. Performance expectancy: the degree to which an individual believes that using the system will help him or her to attain gains in job performance;
2. Effort expectancy: the degree of ease associated with the use of the system;
3. Social influence: the degree to which an individual perceives that important others believe he or she should use the new system;
4. Facilitating conditions: the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system; and
5. Voluntariness: the degree to which use of the innovation is perceived as being voluntary or of free will.

Mallat (2007) provided an extensive qualitative model of mobile payment adoption and claimed that seven aspects affected such, including relative advantage, costs, compatibility, complexity, network externalities, perceived risks, and trust in mobile payment service providers. Three of these seven aspects, relative advantage, compatibility, and complexity, are adopted from Roger's IDT. The four remaining constructs are additional, and their definitions are the following:

1. Costs: the transaction fees for using mobile payments;
2. Network externalities: the perceived effect that one user of a good or service has on the value of that product to other people; also called the network effect;
3. Perceived risks: security problems, including unauthorized use of the mobile phone, privacy leakage, errors in payment transactions, device and mobile network reliability, vagueness of the transaction, and perceived lack of control; and
4. Trust in mobile payment service providers: the trait of believing the honesty and reliability of payment service providers.

Both the IDT and the TAM focus on the innovations' attributes that influence consumer acceptance; however, the UTAUT and Mallat's (2007) findings incorporate social factors (social influence, facilitating conditions, and network externalities) and consumer characteristics (voluntariness and trust).

Motivating drivers of innovation adoption are diverse, and in researching American farmers' adoption of some agricultural technologies, Rogers (1962) specified that the rate of diffusion depends on a host of variables, such as consumer characteristics, new product attributes, social context, and marketing environment. Based on Rogers' findings, Nakata and Weidner (2012) developed a comprehensive, unique New Product Adoption model for BOP consumers. Unlike many extant works that have suggested consumer characteristics are parallel factors as innovation attributes or social factors, affect innovation adoption intention, and, in turn, influence final adoption, Nakata and Weidner's New Product Adoption model for BOP consumers proposed a negative relationship between BOP consumers' characteristics and innovation adoption. Nakata and Weidner proposed three major domains—New Product Attributes, Social Context, and Marketing Environment, which affect the negative relationship between poverty (economic, physical, psychosocial, and knowledge deprivation [adapted from Nobel Laureate Amartya Sen, 1999]), and innovation adoption.

In their model, Nakata and Weidner (2012) only chose positive subfactors that moderate or weaken the negative relationship of poverty and adoption. New Product Attributes include affordability, visual comprehensibility, adaptability, relative advantage, and compatibility; the social context contains social capital, assimilationist culture, and collective need; and the marketing environment is composed of interpersonal communication, atomized distribution, and flexible payment forms.

Some constructs of new product attributes are the same as Rogers' IDT, but the definition of the new constructs are as follows:

1. Visual comprehensibility: the degree to which a new product is intuitively comprehended through its design and packaging;
2. Adaptability: the degree to which products are already adapted or easily adaptable to conditions of scarcity and hostility;
3. Social capital: trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions;
4. Assimilationist culture: the process by which a person's or group's culture comes to resemble those of another group;
5. Collective need: the degree to which group needs predominate;
6. Interpersonal promotions: the degree to which a new product is promoted through personal ties;
7. Atomized distribution: channel arrangements that bring products as proximate to customers as possible—often through many small or individual distributors; and
8. Flexible payment forms: methods of payment that enable purchases on limited incomes.

Liu and Ye (2014) found that social influence, perceived risk, perceived playfulness, perceived usefulness, and perceived ease of use are the factors that affect the intention of adopting and using WeChat Pay. In the research on Indians' adoption of mobile internet banking, Bryson, Atwal, Chaudhuri, and Dave (2015) proposed that attitude toward use, perceived usefulness, perceived ease of use, subjective norm (which many scholars consider similar to social influence), perceived behavioral control, facilitating conditions, perceived security risk, and perceived integrity determined the intention to use. Dong (2011) found that perceived usefulness, result demonstrability, and facilitating condition were salient behavioral beliefs determining behavior intention of Chinese users of information technology innovations in remote areas. High uncertainty avoidance, which is an aspect of Chinese culture, was suggested to cause Chinese people to require certain outcome knowing, which indicates clear demonstrability of results (Dong, 2009).

Holak, Lehmann, and Sultan (1987) argued consumer expectations or preferences affect the adoption of technological innovations. Consumer preferences mainly include network, price, brand image, promotional offer, or internet speed. Herzog (1963) found that brand image significantly influences technological innovation adoption, and Hasan et al. (2017) insisted that visual cues are a very important factor for BOP consumers' innovation adoption.

To some extent, there are some overlaps among these theories, particularly those of the IDT, TAM, UTAUT, and Mallat (2007) model. For example, perceived usefulness was adopted many times, and facilitating condition, in some ways, includes network and internet speed.

All research of innovation adoption in the context of developed countries finds either well-educated or non-poor consumers to be considered as target markets. Few studies are evidenced concerning mobile payment adoption among BOP consumers, often characterized as having low literacy rates and limited numeracy skills (Hasan et al., 2017; Nakata & Weidner, 2012; Prahalad, 2005). Therefore, this article aims to explore further factors influencing mobile payment adoption among BOP consumers.

3 | RESEARCH CONTEXT

China was chosen as the research context for this study given the high percentage of its population who live under the poverty line and thus represent a large part of global BOP consumers and because, as a result of the booming mobile phone industry, mobile payment service is widely used in China. China is also different from other BOP markets. It has overcome the challenges of developing technology by building a tech ecosystem, which was constructed by ensuring an advanced educational system, actively participating in global supply chains, developing strong business and engineering skillsets, and supporting private and venture capital ecosystems (Saal et al., 2017). According to the China Internet Network Information Center (CNNIC), by March 2017, the number of mobile internet users in China had reached 695 million, accounting for 95.1% of its Internet population (731 million), and 67.5% of its internet users have adopted mobile payments services (China Internet Network Information Center, 2017).

4 | PRODUCT CATEGORIES

WeChat Pay and Alipay are the two most successful platform representatives adopted by merchants and consumers during the last several years. WeChat Pay was introduced in August 2013 as a value-added product of WeChat, the largest chatting platform on smartphones in China, which was developed at the beginning of 2011. The predecessor of WeChat was QQ, the giant Internet-based chatting platform launched in 1999 by Tencent company and presently serving 890 million monthly active users, but most of these users turned to WeChat after its 2011 launch. The other player is Alipay an Internet-based online purchasing payment platform that can be downloaded on smartphones and which was introduced in 2008. Because these two payment platforms dominate the Chinese mobile payment market, this study chose them to investigate mobile payment adoption among BOP consumers in China.

5 | METHODOLOGY

An exploratory qualitative research method was chosen to study mobile payment adoption in the BOP market context because empirical research and knowledge on this subject is scarce, and the alternative, the quantitative method, could not be used and would not offer an accurate picture of the research subject.

Miles and Huberman (1994) claimed that appropriately collected qualitative data provide an insight on naturally occurring, ordinary events in natural settings so that we could have a view as to what 'real life' is like(p.) to some degree in a particular context. Another feature of qualitative data is richness and holism with a strong potential for revealing complexity; such data provide *thick descriptions* that are vivid, nested in a real context, and have a ring of truth that could have a high impact on readers (Guercini, 2014).

A semi-structured research method was used to conduct interviews with BOP WeChat Pay and Alipay users and managers

concerning their innovation adoption attitudes and motivations. Semi-structured interviews are the most common qualitative research methods (Alvesson & Deetz, 2000) and based upon prepared questions and probes guided by identified themes to draw forth more elaborate responses. During May 2017, a total of 26 semi-structured interviews were conducted. Some interviews were conducted face to face and some interviews were conducted through telephone call and WeChat call. We recorded and transcribed all interviews.

Then, this study used thematic analysis to identify key themes in the collected data (Braun & Clarke, 2006; Frith & Gleeson, 2004; Hayes, 2000; Sayre, 2001) by summarizing the qualitative data and then assessing it to identify patterns that could form themes and codes for analysis. The data-coding process was data driven, which is an inductive thematic analysis approach. Therefore, respondents' answers are reported under thematic headings in this research, and these thematic headings represent what was derived from the data.

5.1 | Respondents

Table 1 shows the details of interviewees, including employment/user profile, living locations, gender, and age. The length of the interviews was generally from 30 min to 1 hr. The interviewees were identified as BOP members based on their income level. Among all the interviewees, three managers and one store owner were not BOP and they were selected for constructive opinions for this phenomenon. Interviewing different respondents, who has different backgrounds and perspectives also helped us to reduce bias in this study.

6 | FINDINGS

6.1 | Product bundling

Product bundling entails a marketing strategy that adds value by packaging complementary or related products (Sarin, Sego, & Chanvarasuth, 2003; Stremersch & Tellis, 2002) that enhances their adoption among consumers (Reinders, Frambach, & Schoormans, 2010). Weber, Guérin, and de Oliveira (2013) found that optimal bundling of network technologies or services can cause synergies, which stimulate the adoption of innovation. The interviewer asked questions to understand product bundling related to mobile payments. A teacher (R26) in a village thinks that mobile payment is a complementary service of the WeChat chatting platform, and he mentioned,

> At the beginning, WeChat was for chatting and sending files between friends and colleagues. Now, we can also use it for shopping, pay phone bills, and book tickets and hotels.

Similarly, a manager (R12) of a real estate company thinks that Alipay is a complementary service to its online shopping website and helped Alipay become successful in China. The manager mentioned,

TABLE 1 Detail of the interviewee sample

Interviewee no.	Respondent detail
R1	Manager of Alipay, female (Shenzhen), 28, TOP, but had relevant BOP market experience.
R2	Store owner, male (Wuhan), 21, TOP, but had relevant BOP market experience.
R3	Pharmacy staff, female (Wuhan), 30, BOP consumer
R4	End user, male (Foshan), 31, BOP consumer
R5	End user, female (county), 32, BOP consumer
R6	End user, male (teacher in Wuhan), 30, BOP consumer
R7	End user, female (Wuhan), 30, BOP consumer
R8	End user, female (Wuhan), 31, BOP consumer
R9	End user, male (teacher in village), 32, BOP consumer
R10	End user, male (teacher in village), 30, BOP consumer
R11	End user, male (Dongguan), 31, BOP consumer
R12	Manager of a real estate company, male (Beijing), 39, TOP, but had relevant BOP market experience
R13	End user, male (Hangzhou), 35, BOP consumer
R14	End user, male (Hangzhou), 32, BOP consumer
R15	Mobile payment software technician, male (Beijing), 37, BOP consumer
R16	End user, male (Wenzhou), 29, BOP consumer
R17	End user, male (Yiyang), 30, BOP consumer
R18	End user, male (Shandong), 46, BOP consumer
R19	End user, male (teacher in village), 32, BOP consumer
R20	End user, female (Foshan), 22, BOP consumer
R21	End user, male (Huangshi), 31, BOP consumer
R22	End user, female (Wuhan), 21, BOP consumer
R23	End user, female (village), 38, BOP consumer
R24	End user, male (Xinjiang), 41, BOP consumer
R25	End user, female (Wuhan), 34, BOP consumer
R26	End user, male (teacher in village), 32, BOP consumer

> Everybody was using the online shopping website of Alipay. Then they introduced mobile payment function. Alipay succeeded because their online platform was successful and was already adopted by many consumers.

Bundling with third parties (national institutes & private merchants) makes mobile payment popular among the deprived. Cooperating with State Grid, Water Conservancy Bureau and local banks in rural areas is also very important. The deprived earn feeble and instable incomes, but they should pay for the fees of daily consumption of water and electricity. Generally, these transactions can only be finished in physical bureaus in local town centers. It is very inconvenient and expensive for the transportation. Using mobile payment among the poor for paying the charges of water, gas, and electricity, can facilitate and improve their quality of life. Some BOP consumers claimed as below:

> What attracts me most is their third party payment services. They can be used to call taxi, and to book train tickets with seats, without going to stations. (R6)

For WeChat Payment and Alipay, they have already communicated and cooperated with the State Grid, Water Conservancy Bureau and banks. And then these departments push the mobile payment methods to end users. Consumers believe them. Many will try it. It is more effective and convincing. (R17).

In our village, most of parents are working in big cities, just leaving the old and children at home. Using mobile to transfer the fees is more acceptable for them. Now the education center of our county only accepts fund transferred by WeChat Payment rather than cash. (R26).

The first time I used these mobile payments, was due to the promotion activities in a supermarket in the town center. They cooperate with local supermarkets. If you pay with mobile payments, consuming RMB100 goods, RMB50 would be returned to your account. Why not use them? (R19).

Therefore, these comments imply product bundling is important for the mobile payment adoption in the BOP context.

6.2 | Institutional interferences

The rapid development of mobile payment has brought huge losses and competition to traditional state-owned banks. However, mobile payment has also made a significant contribution by building trust among financial service consumers since the financial crisis. Some respondents said, the providers of mobile payment platforms share the profit with banks, and achievements of mobile payment are even better than banks in some areas. The convenience consumers gain from mobile payment platforms attracts many more who often use mobile payment rather than bank cards or cash. Because of these losses, banks have initiated regulations to constrain the mobile payment business, which to a large extent depends on banking support because consumers link their bank accounts with mobile payment.

A teacher (R6) in the Wuhan region mentioned:

> WeChat Payment and Alipay charged no transaction fees at the beginning. Later, banks pushed WeChat and Alipay to charge transaction fees through some regulations.
>
> The addition of transaction fees, which is negligible for TOP, while as for BOP consumers whose income is unstable and low, influence the poor's adoption of mobile payment. A housewife (R5) from remote county said,
>
> The new appearance of transactions makes me use mobile payment less, while before I used it a lot.

A teacher (R9) from poor village said,

> It is just nonsense to charge us transaction fees. We earn so little money per month. I will not use it at all.

Also, small-sum-oriented mobile payment transactions are one of the results of the government's and banks' micro-regulations, which, in turn, affect consumer mobile payment adoption. A mobile payment software technician (R15) in the Beijing region mentioned that

> One of the drawbacks of these mobile payment platforms is their small-sum-oriented transaction. Because mobile payments grab the cake [profit] of banks, banks limit their [mobile payment's] power and development. It is not technical issues. At the very beginning of their appearances, they just do small-sum business. Banks don't want the mobile payment companies to do the large-sum transactions.

A poor educated woman (R8) from a remote poor village, who was looking for a job in Wuhan said,

> It is very inconvenient because of the limitation of transferring sum. Sometimes if urgent things happen, we need a little bit money, our friends can just transfer us at most 5000RMB (around $750).

These comments imply that institutional interference can hinder mobile payment adoption in the BOP context. Although trust building was necessary after the financial crisis, it may hinder the trust-building process among financial service consumers.

6.3 | After-sale services

Mobile payment companies need to efficiently address after-sale services, such as addressing complaints, offering consultant help, and removing counterfeit products because these services are crucial for mobile payment adoption among BOP consumers. Several interviewees encountered some embarrassing situations. A consumer (R4) from the city of Fosan mentioned,

> One day, I went to a public park with my family to have fun and [I] felt thirsty. We found a vending machine to buy soft drinks. We paid with WeChat Payment, but the soft drink bottle didn't come out. We didn't know to whom we could call for help, either the owner of the vending machine or WeChat Payment. It was very confusing. At last, we left without getting the soft drink.

Similarly, a store owner (R2) recounted,

> The after-sales service should be a big concern for these mobile payment platforms. People find it difficult to solve this issue, if any problems occur.

On the other hand, in remote places, many BOP consumers want to do online shopping because of its lower price compared with

shopping in real stores. However, third party payment members of mobile payment cannot offer direct delivery services, and sometimes send wrong or fake products to consumers, which in turn affect the deprived affection of mobile payment.

As said by a housewife (R23) from remote place,

> Logistics company just send goods to post office in town center. So, we should go there ourselves to pick them up. It is very inconvenient. Meanwhile, there are too many liars of online shopping. Sometimes we get goods with bad quality or even wrong ones.

It is understood from these extracts of interviews that after-sale service influences mobile payment adoption in the BOP context.

6.4 | Perceived integrity of corporations

Consumers' perceived integrity of corporations affects their trust (Bryson et al., 2015; Flavián, Guinalíu, & Torres, 2005; Fuller, Serva, & Benamati, 2007). It is mentioned earlier that trust building among the consumers of financial service is crucial since financial crisis. Therefore, consumers' perceived integrity of corporations is important. Yousafzai, Pallister, and Foxall (2003) found that the reputation of or trust in the institution plays an important role in users' new technology adoption. Some interviewees said that they believed security risks exist for each online transaction, but corporate integrity can reduce the perceived risk. The more powerful and influential the corporation is, the more secure the consumer feels. A consumer (R14) mentioned, "The reputation of these two mobile payment companies are better than other companies."

Benevolent and charitable activities can improve the perceived integrity of a corporation, and, to some extent, it can improve BOP consumers' acceptance of the corporation and its products. A consumer (R22) responded, "I think providers of mobile payments can do charitable activities to attract more users." Therefore, from the comments, we can imply that perceived integrity can influence mobile payment adoption in the BOP context, and it is important to build trust among financial services consumers after the financial crisis.

6.5 | Monopoly and information opaqueness

According to Prahalad (2005), free and transparent private-sector competition, unlike local village and shantytown monopolies controlled by local slum landlords, can transform the "poor" into consumers (page 5). Prahalad (2005) also found that due to local monopolies, inadequate access, poor distribution, and strong traditional intermediaries, poor Indian residents in the shantytown of Dharavi outside Mumbai pay a premium for everything from rice to credit, a phenomenon he called a poverty penalty. However, converting the large and untapped BOP market currently controlled by local monopolies to an organized and private sector market is a big challenge. The World Business Council for Sustainable Development has claimed one key to the sustainable development of corporations is improving the market system by a supportive framework of public laws that promote competition and transparent accounting standards. Rost and Ydrén (2006) argued that to some extent, accounting and corporate development information transparency improve consumer impressions and company loyalty. Conversely, monopolies and information opaqueness lead to consumer distrust, which then influences their attitude toward new products of the company. As the trust level among the consumers of financial services reduced after the 2008 financial crisis, it was important for governments and companies to ensure openness by promoting competition and transparent accounting standards.

WeChat Pay and Alipay are two giants in the mobile payment industry; however, many consumers doubt these two companies are big enough to take over the BOP market. Some interviewees stated that a monopoly could hinder the development of mobile payment and, to some degree, could affect their use and adoption of it. Meanwhile, others were critical of their transparency of company information. A manager (R12) of a real estate company commented,

> In the future, I hope their information, including financial information, will be shared with the public. And more similar companies join in this industry to divide and refine different functions. Mobile payment monopolized by two companies is not good for development.

Similarly, a teacher (R10) from a village remarked,

> I don't use them very often because I doubt the operation of big private companies. Companies should be more transparent so that people can believe them.

As for mobile payment itself, some doubt its security, especially for BOP users who do not quite know how mobile payment functions and often worry about the loss of their money.

> Payment without password is a default of mobile payment. Transaction under 200RMB ($30) can be charged directly by scanning machine of shop owner regardless of passwords from users…We are not sure about it. If mobile phone gets lost, others can use our money. (R11)
>
> We don't know how it functions. It is full of danger. I am afraid that my money will be stolen by others. On the other hand, private information can be collected by mobile payment providers and then be leaked to those need it. (R10)

It is understood from these interview extracts that a monopoly and information opaqueness can hinder mobile payment adoption in the BOP context.

7 | DISCUSSION AND IMPLICATIONS

It was found from this research that product bundling influences innovation adoption (Reinders et al., 2010; Rost & Ydrén, 2006; Weber et al., 2013). Both WeChat Payment and Alipay are bundled with their former functions, like chatting and online shopping (Zhou, 2014), and are also packaged with many third-party payment services, and this has led to their popularity among exiting and new users, including the poor. In addition, poor after-sale services hamper new product diffusion (Potluri & Hawariat, 2010), and in the case of mobile payment companies, inadequate after-sale services can hinder poor consumers' mobile payment adoption.

In this research, we propose that perceived integrity of a corporation and monopoly and information opaqueness influence innovation adoption among BOP consumers, and it can contribute by building trust among consumers of financial services. Prahalad (2005) and Herzog (1963) claimed that a corporation's reputation affects innovation diffusion. Bryson et al. (2015) argued that the perceived integrity of a corporation influences adoption. Lieberman (1981) and Mayer, Davis, and Schoorman (1995) found that perceived integrity is an important trust factor, which then influences mobile payment adoption (Zhou, 2014). For example, Unilever's integrity makes it very popular in Indonesia, where 95% of the population across all socioeconomic groups use at least one Unilever product (Rost & Ydrén, 2006). Mallat (2007) found that consumers are more willing to conduct mobile payments with trustworthy transaction parties and that reliable and well-established payment service providers are appreciated more than unknown and smaller competitors.

WeChat Pay and Alipay have both worked hard to build their reputations and have collaborated with various schools to provide loans to poor students, plant trees in deserts, and sponsor charitable activities to enhance their perceived social responsibility and integrity. In return, consumers use their mobile payment services.

Prahalad (2012) argued that a local monopoly is a big challenge to subsistence markets, and Rost and Ydrén (2006) claimed corporate accountability and development information transparency is important to consumers. Therefore, when consumers perceive a large company to be a monopoly, it can negatively influence consumer adoption of its products or services, but a company's transparency to its consumers may increase adoption of their products in the BOP market.

This study also presents some implications that managers may find significant. First, innovative product bundling can improve a product's attractiveness (Schilke & Wirtz, 2012), and once it has been deemed attractive in a market, especially the BOP market, the perceived availability of effective after-sale services influences the sale of the product. Potluri and Hawariat (2010) found that poor after-sales services negatively affect innovation adoption among the poor; therefore, an emphasis on after-sale service improvements could increase adoption of mobile payment among BOP consumers. Second, corporations must reduce the threat of institutional interference to increase adoption of mobile payment. Furthermore, corporations must actively work to build consumer confidence in its integrity and support benevolent and charitable activities, which can lead to greater trust in innovation providers (Mayer et al., 1995), and this trust can increase innovation adoption (Zhou, 2014), particularly in the BOP market.

8 | CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH DIRECTION

This research fills the literature gap in the research of the factors that influence mobile payment adoption among BOP consumers and provides a framework for further conceptual and empirical studies on innovation adoption. Since the 2008 financial crisis, the trust level toward financial services has significantly reduced among not only the TOP consumers but also the BOP consumers. Therefore, regaining trust through technology-enabled platforms, like mobile payment, among consumers of financial services is important.

Extant researches on innovation adoption mostly point to the TOP, not the BOP, markets and consumers, and this research provides companies wanting to tap into the BOP markets with mechanisms, such as cooperating with social and institutional associations, to promote their products, improve their images, and eliminate negative institutional interference and cultural obstacles. Consequently, this can start building consumers' trust, which has been appreciably reduced since the financial crisis.

This research has explored new factors that can influence mobile payment adoption, but it has limitations. A qualitative research method was exclusively used, and semi-structured interviews conducted. Future research could apply a quantitative method with a larger sample size, which would make the results more generalizable. The research was restricted to China; future research could investigate mobile payment adoption among BOP consumers of other developing countries. Finally, future research might unearth additional drivers of adoption.

REFERENCES

Alvesson, M., & Deetz, S. (2000). *Doing critical management research*. Thousand Oaks, CA: Sage.

Apanasevic, T., Markendahl, J., & Arvidsson, N. (2016). Stakeholders' expectations of mobile payment in retail: Lessons from Sweden. *International Journal of Bank Marketing*, *34*(1), 37–61.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101.

Bryson, D., Atwal, G., Chaudhuri, H. R., & Dave, K. (2015). Understanding the antecedents of intention to use mobile internet banking in India: Opportunities for microfinance institutions. *Strategic Change*, *24*(3), 207–224.

China Internet Network Information Center (CNNIC). (2017). 39rd Statistical survey report on the internet development in China. Beijing: China Internet Network Information Center. Retrieved from https://cnnic.com.cn/IDR/ReportDownloads/201706/P020170608523740585924.pdf

Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–340.

Dong, J. Q. (2009). User acceptance of information technology innovations in the Chinese cultural context. *Asian Journal of Technological Innovation*, *17*(2), 129–149.

Dong, J. Q. (2011). User acceptance of information technology innovations in the remote areas of China. *Journal of Knowledge-Based Innovation in China*, *3*(1), 44–53.

Flavián, C., Guinalíu, M., & Torres, E. (2005). The influence of corporate image on consumer trust: A comparative analysis in traditional versus internet banking. *Internet Research*, *15*(4), 447–470.

Frith, H., & Gleeson, K. (2004). Clothing and embodiment: Men managing body image and appearance. *Psychology of Men and Masculinity*, *5*(1), 40–48.

Fuller, M. A., Serva, M. A., & Benamati, J. (2007). Seeing is believing: The transitory influence of reputation information on e-commerce trust and decision making. *Decision Sciences*, *38*(4), 675–699.

Guercini, S. (2014). New qualitative research methodologies in management. *Management Decision*, *52*(4), 662–674.

Hasan, M. R., Lowe, B., & Rahman, M. (2017). Visual cues and innovation adoption among bottom of the pyramid consumers. *Qualitative Market Research: An International Journal*, *20*(2), 147–157.

Hayes, N. (2000). *Doing psychological research*. Abingdon, England: Taylor & Francis.

Herzog, H. (1963). Behavioral science concepts for analyzing the consumer. In P. Bliss (Ed.), *Marketing and the behavioral sciences* (pp. 76–86). Boston, MA: Allyn and Bacon.

Holak, S. L., Lehmann, D. R., & Sultan, F. (1987). The role of expectations in the adoption of innovative consumer durables: Some preliminary evidence. *Journal of Retailing*, *63*(3), 243–259.

Holden, W. (2012). *By now, pay mobile*. Hampshire, England: Juniper Research Limited.

Lieberman, J. K. (1981). *The litigious society*. New York, NY: Basic Books.

Liu, Y., & Ye, T. Y. (2014). Research on user's adoption of WeChat payment. *Value Engineering*, *2014*(10), 131–133 134.

Mallat, N. (2007). Exploring consumer adoption of mobile payments–a qualitative study. *Journal of Strategic Information Systems*, *16*(4), 413–432.

Mallat, N., & Tuunainen, V. K. (2008). Exploring merchant adoption of mobile payment systems: An empirical study. *e-Service Journal*, *6*(2), 24–57.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management. Review*, *20*(3), 709–734.

Miles, M. B., & Huberman, M. A. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks: Sage.

Nakata, C., & Weidner, K. (2012). Enhancing new product adoption at the base of the pyramid: A contextualized model. *Journal of Product Innovation Management*, *29*(1), 21–32.

Phonthanukitithaworn, C., Sellitto, C., & Fong, M. W. L. (2016). An investigation of mobile payment (m-payment) services in Thailand. *Asia-Pacific Journal of Business Administration*, *8*(1), 37–54.

Potluri, R. M., & Hawariat, H. W. (2010). Assessment of after-sales service behaviors of Ethiopia telecom customers. *African Journal of Economic and Management Studies*, *1*(1), 75–90.

Prahalad, C. K. (2005). *Fortune at the bottom of the pyramid: Eradicating poverty through profits*. Upper Saddle River, NJ: Prentice Hall.

Ramani, S. V., SadreGhazi, S., & Duysters, G. (2012). On the diffusion of toilets as bottom of the pyramid innovation: Lessons from sanitation entrepreneurs. *Technological Forecasting and Social Change*, *79*(4), 676–687.

Rangan, V., Chu, M., & Petkoski, D. (2011). Segmenting the base of the pyramid. *Harvard Business Review*, *89*(6), 113–117.

Reinders, M. J., Frambach, R. T., & Schoormans, J. P. L. (2010). Using product bundling to facilitate the adoption process of radical innovations. *Journal of Product Innovation Management*, *27*(7), 1127–1140.

Rogers, E. M. (1962). *Diffusion of innovations* (1st ed.). New York, NY: Free Press.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.

Rost, C., & Ydrén, E. (2006). *Profit for the poor: Sustainable market development in BOP market (master's thesis)*. Jönköping, Sweden: Jönköping International Business School.

Saal, M., Starnes, S. K., & Rehermann, T. (2017). *Digital financial services: Challenges and opportunities for emerging market banks (Vol. 42)*. EM Compass Note. Washington, DC: World Bank Group. Retrieved from http://documents.worldbank.org/curated/en/750421502949470705/Digital-financial-services-challenges-and-opportunities-for-emerging-market-banks

Sarin, S., Sego, T., & Chanvarasuth, N. (2003). Strategic use of bundling for reducing consumers' perceived risk associated with the purchase of new high-tech products. *Journal of Marketing Theory and Practice*, *11*(3), 71–83.

Sayre, S. (2001). *Qualitative methods for marketplace research*. Thousand Oaks, CA: Sage.

Schilke, O., & Wirtz, B. W. (2012). Consumer acceptance of service bundles: An empirical investigation in the context of broadband triple play. *Information & Management*, *49*(2), 81–88.

Sen, A. (1999). *Development as freedom*. New York, NY: Random House.

Stremersch, S., & Tellis, G. J. (2002). Strategic bundling of products and prices: A new synthesis for marketing. *Journal of Marketing*, *66*(72), 55–72.

Venkatesh, V., Morris, M., Davis, G., & Davis, F. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, *27*(3), 425–478.

Weber, S., Guérin, R., & de Oliveira, J. (2013). *When can bundling help adoption of network technologies or services?* IAB Workshop on Internet Technology Adoption and Transition (ITAT), Cambridge, UK, December 4–6, 2013.

Yousafzai, S. Y., Pallister, J. G., & Foxall, G. R. (2003). A proposed model of e-trust for electronic banking. *Technovation*, *23*(11), 847–860.

Zhou, T. (2014). Understanding the determinants of mobile payment continuance usage. *Industrial Management & Data Systems*, *114*(6), 936–948.

AUTHOR BIOGRAPHIES

Rajibul Hasan is an assistant professor of marketing at the Rennes School of Business, France. His research interests include branding, consumer behavior, diffusion of innovation, technology acceptance models, ethics in marketing, bottom-of-the-pyramid market, and poverty alleviation.

Yinggang Liu is interested in innovation adoption, brand, poverty alleviation, technology management, consumer behavior, emerging market, and the Bottom-of-the-Pyramid market.

Philip J. Kitchen is a professor of Marketing at Salford University, U.K. His research lies in corporate and marketing communications, globalization, and marketing theory. He has published on these and related topics.

Mizan Rahman has been a senior lecturer in marketing at the University of Lincoln since 2004. He is interested in macro-marketing issues at the nexus of marketing and society in areas such as advertising and marketing ethics, responsible and sustainable marketing, place marketing, international marketing, and economic development. Before his academic career, he has worked in the advertising, pharmaceuticals, and charity sectors.

How to cite this article: Hasan R, Liu Y, Kitchen PJ, Rahman M. Exploring consumer mobile payment adoption in the bottom-of-the-pyramid context: A qualitative study. *Strategic Change*. 2019;28:345–353. https://doi.org/10.1002/jsc.2289