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ABSTRACT

Success of mobile commerce hinges on the availability of methods of payment that are secure, ubiquitously available, globally accepted, and easy-to-use. Mobile payment (mPayment) entails making payments using mobile devices such as wireless handsets, personal digital assistants, and other radio frequency (RF) and near field communication (NFC) devices. While mPayment is still in its infancy, its acceptance is likely to increase considerably in the coming years. In the United States, the acceptance of mPayment lags behind that of Europe and Asia. In the U.S, many experts believe that the next step in mPayment evolution is the development of a single-device and ubiquitous mPayment solution that offers consumers speed and convenience in both online and point-of-sale transactions. This paper identifies factors that influence consumer mPayment adoption in the United States using data gathered from 299 consumers. Further, the paper examines the relationships between adoption enabling factors and users' demographic and digital lifestyle traits.

INTRODUCTION

With the birth of eCommerce, digital forms of commerce helped replace or supplement the traditional physical places of business with virtual locations. Various digital online payment methods such as digital cash and e-wallet emerged to help consumers transact with convenience and confidence in the virtual marketplace. Recent innovations in mobile and wireless technologies have freed consumers from the spatial and temporal constraints of traditional commerce (Balasubramanian, et al., 2002) - hence, consumers' demand for the ability to transact anytime and from anywhere is increasing. Proliferation of mobile commerce (mCommerce), especially in the business-to-consumer (B2C) sector, will require ubiquitous, globally accepted, easy-to-use, and secure methods of payment. Today, many of the non-traditional transaction based industries (e.g., venues, tolls, transit, home repair, etc.) have limited abilities to use the prevailing universal card networks for micro, small, and alternative payments. Most consumers have to use at least two payment methods and as many processes for daily purchases. For example, a consumer may use a prepaid contactless payment device or cash for toll passage while using a credit/debit card or check to purchase fuel for the vehicle. As this example illustrates, payment options at different merchants are not always interoperable, forcing consumers to carry multiple forms of payment.

The payment industry is experiencing a convergence of technologies and transaction processes. The integration of payment systems and mobile devices is a reality as mobile devices are effective in enabling secure and convenient payment transactions (Herzberg, 2003). This accrues many recognizable benefits for stakeholders and also changing consumer behaviors that favor adopting new and creative forms of payment methods are accommodated. Mobile payment (mPayment) refers to making payments using mobile devices including wireless handsets (e.g., cell phones and Blackberry devices), personal digital assistants (PDA), radio frequency (RF) devices, and near field communication (NFC) based devices. The payment industry is hoping that mPayment will deliver the convenience, transaction speed, and versatility required in today's complex marketplace. While mPayment is still in its early stages, experts predict that the global mPayment transaction volume will exceed $37 billion by 2008 (New Media Age, 2004). Research and development efforts from financial and technology firms to develop mPayment methods have resulted in a myriad of incompatible and competing standards. According to ePayment Systems Observatory's database (http://www.e-pso.info/), over 183 types of mPayment systems exist just within Europe.

Europe and Asia have seen an increasing acceptance of mPayment but in the U.S., consumer acceptance of mPayment is lagging. This can be attributed to several factors. First, the U.S. already has a well established,

efficient, and safe payment system in the form of credit cards and debit cards. This makes it difficult for a new payment system to penetrate an established system (Becker, 2007). Second, for consumers to consider adopting mPayment, it must clearly demonstrate cost savings, convenience, and value-added. Third, the lack of unified standards and perceived security and privacy concerns has slowed mPayment adoption in the U.S. (Mallat, 2007). In Europe and Asia (particularly, Japan), there are more unified mobile standards – allowing carriers to offer and consumers to accept and adopt mPayment services relatively easily. In spite of these barriers, lately, U.S. consumers are showing a growing interest in using their mobile devices as a payment tool (Laukkanen, 2007). A recent study found that about half of the respondents were willing to use a mobile banking and payment application if offered to them (Sraeel, 2007). Yet another survey conducted by Visa found that 61% of the younger respondents were interested in making purchases using their mobile phones (Smith, 2007). Most studies on mPayment have been conceptual or anecdotal, and they largely focus on the technical aspects of payment processes (e.g., Herzberg, 2003; Varshney, 2003; Chou, et al., 2004; Ondrus & Pigneur, 2006). This study, on the other hand, utilizes empirical data to explore key issues related to U.S. consumers' propensity to adopt mPayment. Data collected from 299 potential mPayment adopters is used to addresses the following two research questions:

- What factors influence a consumer's intention to adopt mPayment?
- How are consumer-demographic and digital lifestyle characteristics related to mPayment adoption decisions?

The remainder of the paper is organized as follows. We will first review the current state of mPayment by discussing the major forms of mPayment. Second, the research methodology employed in this study will be discussed. The discussion includes a description of the measurement development and data collection process. This is followed by data analysis and a discussion of the findings. Finally, implications for researchers and practitioners are also discussed.

MAJOR FORMS OF mPAYMENT

There exist two major forms of mPayment: cellular mPayment and contactless mPayment. In cellular mPayment, also called "dial & confirm", payments are made using cellular based mobile devices for both online and point-of-sale transactions. Here, the consumer first sets up an account with a mobile payment provider (e.g., PayPal) and associates a payment mechanism such as a credit card, debit card, bank account, or a prepaid card to the account. Then the consumer links a mobile phone number to the established account. Now the consumer can initiate a payment using his or her mobile phone by sending a text message to the payment service provider. The transaction is confirmed when the consumer provides a password or a PIN to the provider when prompted. The outcome of the transaction is then communicated to the consumer in the form of a text message. The migration from traditional payment methods to cellular mPayment is largely driven by the high penetration of mobile devices, improved bandwidth of wireless networks, and increased m-commerce activities. The largest multinational implementations of cellular mPayment include the now collapsed Simpay, which was founded by Orange, Telefonica Moviles, T-Mobile, and Vodafone.

Contactless mPayment, also called "wave & go", on the other hand, in a proximity payment method in which no contact between a payment device and the merchants' interfacing reader is required. The transmission technologies behind contactless mPayment include RF and NFC technologies, among which, Radio Frequency Identification (RFID) is gaining increasing popularity (Attaran, 2006). Contactless mPayment is generally used for point-of-sale transactions. RF or NFC technology transmits transaction data between the device (e.g., contactless interface smart card) and the merchant's point-of-sale terminal. Recognizing the tremendous potentials of contactless technology including increasing revenue, reducing costs, and improving transaction speed and convenience, a growing number of merchants are participating in contactless mPayment pilots and are at various stages of large-scale rollouts. As of February 2006, the list of merchants that have publicly announced contactless payment rollouts include many Fortune 500 companies such as ExxonMobile and McDonald's. The following table summarizes the key similarities and differences between cellular mPayment and contactless mPayment.

Table 1: Comparison between Cellular mPayment and Contactless mPayment.

	Cellular mPayment	**Contactless mPayment**
Primary Business Drivers	• Increased number of transactions and revenue • Increased acquisition, activation, and retention rates • Improved operational efficiency • Opportunities for data mining	
Primary Usages	Online and point-of-sale purchases	Point-of-sale purchases
Enabling Technology	Cellular technology	RF (ISO 14443 type "A" and "B") and NFC (ISO 18092) technology
Operating Distance	Long distance	Under 20 centimeters
Security	Cryptographic capabilities available	Limited cryptographic capabilities
Authentication	Authenticating users via Subscriber Identification Module (SIM) or by requiring a PIN or password	Manual authentication methods based on the bankcard association rules and merchant's risk tolerance strategy
Connectivity	Communication initiated by the consumer	Automatic or manual initiation of communication when the device is within the reader's electromagnetic field.
Speed of Transaction	Slow if manual data entry is required. Relatively fast if the consumer billing information is pre-stored on the device.	Fast

Industry leaders concur that the integration of Cellular and Contactless mPayment on a single device will likely bolster the mPayment adoption. NTT DoCoMo claims that the next big thing in mobile commerce is embedding a NFC chip with payment information in handset combining both cellular and contactless mPayment functions into one device (Economist, 2005). Imagine if a consumer could use one universal payment device to make both point-of-sale purchases (e.g. food, grocery, clothing, fuel, movie and mass-transit tickets, toll, parking, etc.) and online purchases (e.g., ringtones, music, online products, and online services). The device will allow consumers to decide what payment mechanism they prefer (e.g.,debit, credit, pre-paid, etc.), and receive one usage statement at the end of each billing period. Industry experts believe that this device can be the consumer's mobile handset, PDA, or other wireless and mobile devices. According to ABI research, more than 50% of all mobile handsets will incorporate contactless payment features by 2010 (Sullivan, 2005). The first large scale pilot of this technology in the US was carried out at the Philips Arena in Atlanta in December 2005. Using cellular and NFC technologies and services provided by Philips, Nokia, ViVOtech, and Cingular, season ticket holders were able to use their mobile handsets to pay for purchases as well as download mobile contents (Sullivan, 2005). The advantages of this payment solution for consumers are obvious: transaction convenience and speed due to the use of a single ubiquitous device and interface. For merchants, the new payment method is likely to increase transaction volumes, reduce transaction costs, and enhance customer services and loyalty. Therefore, an integrated mPayment solution may be the key to a wide adoption of mPayment among consumers. Before sizable investments can be made by payment technology and service providers, the issues related to potential consumer adoption of the new payment method must be addressed. The following sections describe a study that investigated these issues.

RESEARCH METHODOLOGY

Measurement Development

To answer the research questions posed, a multi-stage approach was undertaken in developing a suitable measurement instrument. In the first stage, a group of 10 consumers between the age of 18 and 65 and 5 payment industry executives from one of the world's leading payment processing service providers were interviewed to render the key consumer factors in mPayment. The following five themes emerged repeatedly during the interviews: Perceived Transaction Convenience (TC), Perceived Transaction Speed (TS), Compatibility (C), Security Concerns (SC), and Privacy Concerns (PC). The interviewed consumers and executives agreed that these five factors would potentially influence the adoption of mPayment among consumers. The second step was to develop reliable and valid measurements for these five factors so that their impact on mPayment adoption can be measured. An extensive review of the published literature dealing with the identified constructs resulted in an initial list of questionnaire items. Some of the items were adopted from prior studies and modified to fit the context of mPayment. For example, the items measuring C, SC, and PC were adapted from Chen et al., (2004), Suh and Han (2003), and Smith et al., (1996), respectively. New items were developed for TC and TS. See Table 6 for the list of items and the factors they were designed to measure.

Table 2. Factors that Are Proposed to Influence the Adoption of mPayment.

Factor	Definition
Perceived Transaction Convenience (TC)	The extent to which consumers perceive that mPayment increases convenience in the payment process.
Perceived Transaction Speed (TS)	The extent to which consumers perceive that mPayment improves the speed of transaction.
Compatibility (C)	The extent to which mPayment is consistent with the consumer's lifestyle and the way he or she likes to shop.
Security Concerns (SC)	The extent to which consumers are concerned about the following security aspects relevant to mPayment (Suh and Han, 2003): • *Authentication:* Data exchanged during the transaction will be restricted to legitimate users only. • *Confidentiality:* Data exchanged during the transaction can only be read and understood by intended users. • *Non-Repudiation:* Participants of the transaction cannot deny their participation in the transaction • *Data Integrity:* Data exchanged during the transaction are accurate.
Privacy Concerns (PC)	The extent to which consumers are concerned about the following privacy aspects relevant to mPayment (Smith et al., 1996): • *Collections:* The company is collecting too much personal information. • *Unauthorized Access:* Personal information in the database is not protected. • *Errors:* Personal information in the database is inaccurate. • *Secondary Use:* Personal information in the database will be used for purposes other than the ones the consumer authorized.

Identifying traits of consumers that might relate to a higher tendency to adopt mPayment would allow marketers to target the right consumer segments. Prior studies have found that user demographic traits such as gender (Ahuja & Thatcher, 2005), age (Morris, et al., 2005), and education (Doms & Dunne, 1997) affected technology adoption behaviors. Since the subject under study here is a financial instrument, we also included household income as one of the demographic traits to be examined. Bellman, et al., (1999) found in their study that consumers' digital lifestyle traits were better predictors of online buying behaviors than demographics; therefore, four technology-related traits, length of cell phone use, frequency of shopping online, technical ability, and self-reported new technology adopter category, were also included in the study.

Data Collection

All respondents participated in this study voluntarily. A total of 425 individuals were solicited to participate in this study. These individuals were from a university, a corporation, and a professional organization. Prior to the survey, participants were given a description of the integrated mPayment solution discussed earlier in the article. Participants were instructed that the term "mPayment" in the survey refers to the integrated mPayment solution. A total of 299 responses (response rate = 70.4%) were complete and included in the final analysis achieving a sample-to-item ratio of nearly 14:1. Table 3 shows the demographic information of the respondents. Note that in the sample there are 59% males and 41% females, nearly 65% of the respondents have either a college or a postgraduate degree, over three-fourth of them have incomes over $50,000, and over half of them are under the age of 40.

Table 3: Demographic Profile of the Respondents (n = 299).

Gender	Percent (%)
Male	58.6
Female	41.4

Age	Percent (%)
Less than 20	5.1
20 – 29	30.2
30 – 39	20.3
40 – 49	27.1
50 – 59	15.3
60 or over	2.0

Education Level	Percent (%)
Less than high school	0.0
High school diploma	2.4
Some college	33.1
College degree	34.1
Graduate or postgraduate degree	30.4

Household Annual Income	Percent (%)
Less than $25,000	12.6
$25,000 to 49,999	9.7
$50,000 to 74,999	13.7
$75,000 to 99,999	18.7
$100,000 to $124,999	16.5
$125,000 or more	28.8

DATA ANALYSIS

Our analysis of the response data provides a snapshot of the factors associated with mPayment adoption. The first step in our analysis was to examine the reliability and validity of the items measuring the factors in order to ensure the validity of further analysis. The reliability of the constructs was measured by Cronbach's alphas (see Table 4). As the table shows, all Cronbach's alphas were greater than 0.80 demonstrating excellent reliability of the scales. Confirmatory Factor Analysis (CFA) was then performed on the data to determine the validity of the factorial structure. Table 5 displays the fit indices for the measurement model. The results indicate that the measurement model demonstrates excellent model-to-data fit. The items and their factor loadings are displayed in Table 6. All items load highly on the factors they were postulated to measure. Note that the items measuring Authentication, Confidentiality, Non-Repudiation, and Data Integrity load highly on the Security Concerns factor and the items measuring Collections, Unauthorized Access, Errors, and Secondary Use load highly on the Privacy Concerns factor. This suggests that the traditional dimensions of security and privacy concerns are still valid in the context of mPayment.

Table 4: Reliability – Cronbach's Alphas.

Factors	Cronbach's Alpha
Perceived Transaction Speed	0.92
Perceived Transaction Convenience	0.83
Compatibility	0.92
Security Concerns	0.90
Privacy Concerns	0.82

Table 5: Fit Indices for the Measurement Model.

Chi-square	Chi-square/df	NFI	CFI	RMSEA	RMR
396.87	2.00	0.92	0.96	0.06	0.04

Table 6: Items and Their Factor Loadings.

Items	TS	TC	C	SC	PC
I believe that using mPayment will improve the speed of transaction.	0.86				
I believe that using mPayment will save me time.	0.90				
Compared to traditional payment methods, I believe that transactions will be fast if I use mPayment.	0.90				
I believe that using mPayment will be convenient.		0.83			
I believe that using mPayment will be hassle-free.		0.70			
Compared to traditional payment methods, I believe that mPayment methods are more convenient.		0.83			
I believe that using mPayment will fit my lifestyle.			0.90		
I believe that using mPayment methods is compatible with the way I like to shop.			0.90		
I believe that using mPayment methods will enhance my lifestyle image.			0.74		
I believe that using mPayment methods will be fun.			0.69		
I believe that using mPayment methods is suitable for me.			0.93		
I believe that the data exchanged in mPayment will be restricted to legitimate users only (Authentication).				0.75	
I believe that mPayment methods have security controls to maintain data confidentiality (Confidentiality).				0.79	
I believe that mPayment methods will have controls to prevent merchants from denying having participated in a transaction (Non-Repudiation).				0.70	
I believe that mPayment methods will have controls to ensure the accuracy of data (Data Integrity).				0.79	
I believe that mPayment methods will incorporate sufficient security.				0.79	
I believe that mPayment methods will have security controls to prevent fraud.				0.78	
I am concerned about the amount of personal information I will be required to provide when using mPayment (Collection).					0.40
I believe that my personal information stored in the databases for mPayment will be protected (Unauthorized Access).					0.86
I believe that my personal information stored in the databases for mPayment will be accurate (Errors).					0.70
I believe that the personal information I provide for mPayment will only be used for the purposes I authorize (Secondary Use).					0.81
I believe that using mPayment will put my privacy at risk.					0.65

* All factor loadings are significant at the 0.001 level.

With reliable and valid scales in place, it is now possible to study the impact of these factors on consumers' intention to adopt mPayment. Table 7 displays the correlation coefficients of the factor scores and consumers'

intention to adopt mPayment. All five factors were found to correlate significantly ($p < .01$) with adoption intention. The results suggested that higher transaction speed, transaction convenience, and compatibility perceptions would lead to high propensity to adopt mPayment while graver security and privacy concerns would lead to lower propensity to adopt mPayment. Among all the constructs, Compatibility has the highest correlation with Intention to Adopt.

Table 7: Correlations between the Factors and Intention to Adopt mPayment.

Factors	Intention to Adopt mPayment
Transaction Speed	0.52
Transaction Convenience	0.71
Compatibility	0.80
Security Concerns	-0.49
Privacy Concerns	-0.47

* All correlations are significant at the 0.01 level

In order to ascertain whether consumers with different demographic and digital lifestyle traits demonstrate different propensities to adopt mPayment, a series of ANOVA tests were performed. One quick glance at the overall intention (mean Intention to Adopt score = 3.35, SD = .972) does not reveal overwhelming acceptance of this new payment method, but certain consumer segments have shown more readiness than others. The ANOVA analyses showed that Intention to Adopt mPayment was significantly different among consumers with different gender, length of cell phone use, frequency of shopping online, technological ability, and adopter categories. However, no statistically significant difference was found in Intention to Adopt mPayment based on age, education level, and household income (see Table 8). The results further confirmed the notion of Bellman, et al., (1999) that digital lifestyle traits were more powerful predictors of consumer adoption of technology related services.

Table 8: One-Way ANOVA Results for Demographic and Lifestyle Traits.

	Sum of Square	df	MS	F	p
Demographic Traits					
Gender*	12.57	1	12.57	13.86	.00
Age	2.88	5	.58	.61	.70
Education level	2.62	3	.87	.92	.43
Household income	4.21	5	.84	.89	.49
Lifestyle Traits					
Length of cell phone use*	11.50	4	2.88	3.13	.01
Frequency of shopping online*	14.90	4	3.73	4.10	.00
Technological abilities*	17.47	4	4.37	4.86	.00
Adopter categories*	28.15	4	7.04	8.16	.00

* Significant at the 0.01 level

Post-hoc analysis of the five aforementioned traits that have generated significant results revealed some interesting patterns in consumers' intention to adopt mPayment. This analysis showed that male users are more likely to adopt mPayment than female users, and the propensity of mPayment adoption increases as the number of years of cell phone use, frequency of shopping online, and the user's technical ability increase. Finally, the propensity to adopt mPayment is also consistent with the adopter category self-categorized by the users, meaning that early adopters of innovations are more likely to adopt mPayment than late adopters of innovations.

DISCUSSION

Using a sample of 299 potential mPayment adopters, this study explored the following two research questions: 1) What factors influence a consumer's intention to adopt mPayment? 2) How are consumer-demographic and digital lifestyle characteristics related to mPayment adoption decisions? Data analysis yielded many interesting findings and patterns that would help both researchers and practitioners better understand the factors that influence mPayment adoption. For researchers, this study offers sound theoretically foundation for future consumer-centric research in the field of mPayment. For practitioners, the findings of this study provide guidelines for designing new mPayment products and services and targeting consumer segments that are more prone to adopt mPayment.

The findings showed that consumers' Intention to Adopt mPayment was influenced by the following factors: Transaction Speed, Transaction Convenience, Compatibility, Security Concerns, and Privacy Concerns. Interestingly, Compatibility demonstrated the highest correlation with "Intention to Adopt" mPayment. Factors that offer more substantive benefits or threats were far less influential to mPayment adoption decisions than Compatibility. According to Rogers (1995), "Compatibility" refers to the extent to which an innovation is consistent with the prospective user's lifestyle, values, and behaviors. This suggests that designing mPayment processes that are compatible with consumers' shopping behaviors and cognitive process is a key issue in mPayment diffusion. New mPayment solutions should be seamlessly integrated into consumer purchasing processes without requiring extraneous steps, equipment, and training. The mPayment solution should also be fun and help enhance the consumer's lifestyle image.

Observable advantages were important to consumers in their mPayment adoption decisions. Transaction Speed and Transaction Convenience both correlated significantly with Intention to Adopt. This suggests that the new mPayment solution must be able to demonstrate clear advantages over traditional payment solutions in order to attract consumers. Transaction Convenience was found to be the more influential of the two. Overwhelmed by the wide array of communications and payment devices they have to carry with them, consumers today will likely welcome a simplified solution; therefore, the convenience factor can be utilized as a prominent selling point for mPayment products and services.

The diffusion of mPayment also requires merchants to address the security and privacy issues. The data showed that consumers are most concerned about the authentication process in mPayment. In fact, 35.7% of the respondents were either concerned or very concerned about mPayment's ability to authenticate the participants of transactions. Such concerns are not completely unfounded. The media coverage of identity thefts in the recent years has called consumers' attention to the issue of information security (Credit Management, 2005; Sahadi, 2005). Moreover, the authentication methods employed by most of today's mPayment systems are either very weak (e.g., PIN or password) or almost non-existent (e.g., in the case of various contactless mPayment systems). Organizations are recommended to focus on addressing the security issues related to e-commerce transactions using a systematic approach (Bidgoli, 2003). The top privacy concern was found to be *collections*. Consumers were concerned that too much personal information may be collected during the mPayment process. Infringement on consumers' privacy is quickly becoming a major side-effect of an increasingly cashless society. One study found that most Fortune Global 100 companies failed to comply with fair information practices (Ryker & Bhutta, 2005). Harris Poll found that 69% of Americans agreed that consumers have lost all control over how personal information was collected and used by companies (Smith, 2004). To ease consumers' privacy concerns, companies need to increase transparency about what personal information are collected and how they will be used and safeguarded to their customers.

Consumers' digital lifestyle characteristics were found to be better predictors of consumer adoption of mPayment than demographic traits. Only one demographic trait, gender, was found to impact mPayment adoption. Male respondents showed more readiness to adopt mPayment than female. This finding is in line with that of a study by Venkatesh and Morris (2000) where they found that men placed a greater emphasis on "usefulness" while women placed a greater emphasis on "ease of use" in determining Intention to Adopt. In the case of mPayment, while the usefulness of mPayment can be established by its increased transaction speed and convenience, the process of using mPayment has not been proved to be straightforward or trouble-free. Therefore, the lower female intention to adopt may be partially attributed to providers' inability to demonstrate the ease of use of mPayment systems. This finding is also consistent with prior studies that have found gender to be an important moderating variable in the context of e-commerce (e.g., Zhang & Prybutok, 2003). In general, consumers who have used cell phone (a potential device

for mPayment) longer demonstrated higher intention to adopt mPayment. This finding suggested that as consumers get more skillful in and comfortable with using the device, adoption will likely increase as well. Frequent use of online shopping suggests greater willingness to adopt a digital medium for transactions. Also, it was no surprise that consumers who claimed to shop more frequently online showed more readiness to adopt mPayment. Technological abilities and adopter categories show clearer pattern of consumer mPayment adoption behaviors indicating consumers still view mPayment as a technology service rather than a pure financial service. Participants who claimed to have stronger technical ability and be earlier adopter of technology showed more readiness to adopt mPayment.

CONCLUSION

For mPayment solution providers and merchants, this study has identified some key factors that must be addressed. These findings have several implications for the design and marketing of integrated mPayment solutions:

1. The mPayment solution should demonstrate observable benefits such as increased transaction speed and convenience over traditional payment methods.
2. The mPayment solution should be compatible with consumers' lifestyle and the way they like to shop. This means that integrating mPayment process seamlessly into purchasing processes, making mPayment fun and easy to use, and using mPayment to enhance consumers' lifestyle image should be among the top criteria during the design.
3. The mPayment solution should address the various security and privacy concerns.
4. Since consumers tend to not only view mPayment as a financial product but also as a technological product, consumers' technology-related lifestyle characteristics can have profound impact on their adoption decisions. Market segmentation using these variables is likely to generate meaningful results for marketers of mPayment solutions.

mPayment is still in its infancy both in the U.S. and around the world. The field presents ample opportunities for future research (e.g., enabling technologies, payment processes, consumer acceptance, etc.). Future research should take a consumer-oriented approach to first address the issues that are most important to consumer acceptance of mPayment rather than a technology or process-oriented approach. A theoretical framework that examines these issues and the interrelationships among these issues will be highly useful to both researchers and practitioners in their efforts to pave the way for mPayment adoption in the U.S.

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