



Article

# Influence of Social Distancing Behavior and Cross-Cultural Motivation on Consumers' Attitude to Using M-Payment Services

Md. Zahid Alam <sup>1</sup>, Syed Moudud-Ul-Huq <sup>2</sup>, Md. Nazmus Sadekin <sup>3</sup>, Mohamad Ghozali Hassan <sup>4</sup>,\*
and Mohammad Morshedur Rahman <sup>5</sup>

- Department of Management Science and Engineering, School of Economics and Management, China University of Geosciences, Wuhan 430074, China; zahid\_alam@cug.edu.cn
- Department of Accounting, Faculty of Business Studies, Mawlana Bhashani Science and Technology University, Tangail 1902, Bangladesh; moudud\_cu7@mbstu.ac.bd
- Department of Economics, Faculty of Social Science, Mawlana Bhashani Science and Technology University, Tangail 1902, Bangladesh; sadekin08@gmail.com
- Disaster Management Institute (DMI), School of Technology Management and Logistics, College of Business, Universiti Utara Malaysia, Sintok 06010, Malaysia
- Department of Accounting, Faculty of Business Administration, University of Chittagong, Chittagong 4331, Bangladesh; mmrais@cu.ac.bd
- \* Correspondence: ghozali@uum.edu.my

Abstract: With the sustainable economy and the development of innovative technology, China is anticipated to have a large number of mobile payment (m-payment) users due to cultural influences and population size. This payment culture leads to a significant motivation to adopt m-payment services, which can stimulate new users from other groups. The role of cultural motivation is the most important factor in the m-payment context. This paper empirically examines the impact of crosscultural motivation in the context of the practicing of social distancing behavior due to COVID-19 and the mobile payment (m-payment) context. We develop a conceptual model to validate user intention to use mobile payment systems during the COVID-19 crisis. Data were surveyed from 409 international students in China, and the model is validated using the AMOS structural equation modeling approach. Similar to the results of previous studies based on the adoption of mobile payment, this study also confirms the hypothesis testing. The key and robust result is that, due to cultural motivation and social distancing behavior, international students respond swiftly to the use of mobile payment services during COVID-19. Subsequently, perceived usefulness and awareness influence behavior intention to use mobile payment services. The findings of this study suggest that motivational characteristics, including the awareness of efficiency and the social distancing behavior due to COVID-19, play an important role in the adoption of mobile payment. As a result, the empirical results of this research provide useful information to stakeholders so that they can enhance m-payment services strategies and implement these successfully by considering various factors.

**Keywords:** mobile payment; social distancing behavior; cross-cultural motivation; international student; China; COVID-19



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# 1. Introduction

Due to the outbreak of COVID-19, we have had to modify our lifestyle, according to each nation's different rules and regulations. As well aschanging daily patterns of consumption and work due to the impact of the COVID-19 pandemic, the situation has also increased the demand for mobile online payment. There is also an economic and cultural impact of the epidemic, provoking an unforeseen and massive transformation, potentially influencing every aspect of people's lives for the foreseeable future [1]. Consumers have acquired new consumption habits due to this global crisis [2]. Therefore, a recent study

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examined that if people change their behavior and intentions, this can be influenced to mitigate the crisis caused by the epidemic [3]. Many organizations have transformed their systems into new ways of digital working and have rethought their business plans to adapt to the reality of the COVID-19 environment [4].

Using mobile online payment is an excellent digital social distancing practice in this epidemic period. Providing convenient access to information and communication technology leads us to the positive consideration that digital inequality can be finally resolved [5]. Regarding technologically driven service improvements, it appears that consumer choice and consumer interests have changed significantly [6]. The technology acceptance model is a general theoretical framework that refers to consumer behavior [7]. The behavioral intention of consumers has been studied in the scientific literature to analyze behavior when faced with innovation, mostly based on studies in social psychology. According to the mental accounting theory, customer decision-making is related to transaction factors, although there are major differences between different cultures. We argue that significant cultural differences work to trigger a significant sense of worth, but whether this relates to citizens' behavior in a socially harmonious manner depends on the scope of the cultural difference, a term used as a moderated mediation effect, wherein a third-factor moderate the situation as an indirect effect [8]. Simultaneously, academic researchers have discovered that this cross-cultural psychology, in investigating the existing model, might be applied to foreign students and expatriates [9,10] and to situations in which international students place more effort into reaching across cultural borders to obtain resources [11]. For example, it is very difficult for an international student from Latin America to use Chinese to communicate thoroughly and fluently with local people in China. Proactive international students are interested in overcoming the significant challenges provoked by significant cultural distance via actively self-seeking connections and the assistance of others. There is proof that motivational character is in the same category as cross-cultural motivation and can boost social adjustment processes [12]. Subsequently, factors in an individual culture, as well as social standards, heterogeneously drive consumer behaviors. Indeed this motivation can be obtained by cultural intelligence, which includes both cross-cultural internal motivation (i.e., internal appreciation of other cultures) and cross-cultural self-strength (i.e., capability in culturally-diverse circumstances) [13]. If the cultural distance is great, it is more difficult for international students to adjust and to be used to a host country. Over the past century, researchers [14,15] have used management information systems explored in North America and other cultural contexts, but have paid little concentration to cultural influence. Mental accounting theory also indicates that user strategic decision policy is affiliated with transaction attributes [6].

In this study, we argue that cross-cultural motivation and decision-making patterns are relative to m-payment adoption, use, and behavior. Researchers should be cautious of generalization when examining technology adoption, behaviors, and decision-making by students [16]. However, we recommend that better cross-cultural motivation be proactively coordinated in sustaining efforts to adapt and adjust to students' assignments [17]. Besides the influence of cross-cultural motivation, we focus on the usefulness of m-payment adaption and investigate its existing comparative advantage. In the online environment, it will appear that the use of this innovative technology might be valuable in emphasizing a specific result [18]. Furthermore, consumers are aware of internet payment and would benefitto know of potential new uses. For the acceptance of mobile payment systems, spreading financial education practice, financial awareness, and constructing faith or confidence are considered important and key factors [19].

Previous studies have also assumed that consumers' behavior complies with purposeful, aware reasoning and is compatible with specific strong habits when examining the comparison between behavior and intention [20]. There is a vital relationship between social influence and behavioralintentionwhen adopting an innovative technology moderated by cultural motivation [19]. To prevent the outbreak of the corona virus epidemic, people should change their behavior [21] by adjusting to social distancing. Social distancing be-

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havior andphysical isolationcertainly slowdown the transmission of COVID-19 [22]. From the investigations mentioned above, numerous studieshave been conducted on the effect of cultural motivation in other domains of human activity, and more research is needed regarding transferring behavior to mobile online payment. To the best of our knowledge, an examination of the combined role of cross-cultural motivation and social distancing behavioral effect on m-payment context has not been carried out during the COVID-19 pandemic, either theoretically or empirically.

Regarding these issues, we created a research model. This model investigates perceived usefulness to adopt m-payment, cross-cultural motivation, and social distancing behavior but examines hypotheses testing among those constructs. Our research model focused on china, and aimed to answer the following research questions: How do international students quickly use mobile online payments such as Alipay during COVID-19? Additionally, what are the primary key drivers of behavioral intention use mobile payment in China? Our primary purpose is to examine behavioral intention factors relevant to measuring mobile payment for new users in this novelpandemic environment. Broadly, the goal of this study is to investigate the combined effects of cross-cultural motivation and cultural distancing on m-payment usage during the COVID-19 pandemic with the mediation effect of perceived usefulness.

Thus, this study demonstrates the preliminary attempt to deliver answers to the upwards topical burning questions and build the following contributions to the literature. Firstly, this study is a pioneer in the field of cross-cultural motivation and sustainable mobile payment technology in the advent of COVID-19. Therefore, these findings contribute to the existing literature by identifying the role of cross-cultural motivation and social distancing behavior in the mobile payment context. Secondly, this paper highlights the Chinese mobile payment systems concerning the international users' point of view. Thirdly, it expands and improves the approach of [7,16,21,23,24] by introducing cross-cultural motivation perspectives in China and the COVID-19 crisis together in the baseline regression with the attribute of social distancing behavior. More specifically, we explore how social distancing affects the specific general potential to use m-payment and personal beliefs regardingit. We focus on the relative activity during the COVID-19 context on consumer's appearance toward m-payment service. Fourthly, we also address the influence of attitude towards using m-payment as a mediating factor. Finally, this study examines international users' influence on the Chinese m-payment culture.

The study starts with a brief history of the literature on cultural and social distance in general, with the main focal point on the character of cross-cultural motivation, its antecedents, and connection to the actual behavior and intention. The rest of the study carries out as follows. In the following section, we examine the theoretical framework of this research. Next, we present the design ofour research model and describe the research methodology. Then, we introduce the results of the data analysis and hypotheses testing. Finally, we conclude with the implications of our findings, the limitations of this research, and recommended further research.

# 2. Literature Review

In the various online mobile payment system studies, we have found some components whichinfluence behavioral intention use them. There are so many existing previous studies on mobile online payment whichare based on TAM, innovation characteristic of IDT, UTAUT, and UTAUT 2 to anticipate users' behavioral intention [25–28]. Technology Acceptance Model (TAM) was developed in the U.S., and has also been conducted outside of U.S., withstanding the possibility that the model wasculturally biased. TAM studies have also explored the possible influence of national culture on the aspect of innovative technology acceptance [16,29]. In addition, TAM is a robust andpowerful predictive model to address user acceptance, which is generalized as an individual behavior [30–34]. Although TAM has been creditedas a strong supporting tool in explicating sustainable technology acceptance, it has also acquired some criticisms. TAM only focuses on individual users'

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positive intentions of new innovative technology, discarding their negative responses [35]. Generally, UTAUT is suitable for organizational settings, and TAM is used for individual users'aspects [36,37]. This study is also based on user behavioral intention, therefore we use this model. The factors that influence consumer intention to use m-payment indicate that perceived usefulness, perceived trust, and risk are critical factors inpayment service acceptance [38,39]. However, perceived risk may negatively impact behavioral intention use m-payment [40]. Davis (1989) characterizes perceived usefulness as an individual's belief about the advantages gained from advancements.

Besides the related literature review, we found that very few studies have inspected the relationship between motivation and behavioral intention to adopt modern technology [7,41]. Similarly, cross-cultural motivation is an important key factor inpromoting work adoption in a cultural context [17]. For studies looking to highlight the difference of culture, one option is utilizing an approach that specifically contrasts targeted cultural bunches rather than justified by specific cultural variables [42]. Values and practices are the core components of culture. In a general sense, values are steady over time and are difficult to change, and practice includes reviewing the learning picked up amid aperson's socialization in a particular environment [7]. Aset of convictions is acknowledged in society and throughout the process of education. In the case of cultural distance, allegory is deciphered into a focus on what sets societies apart, but not what might bring them together. Subsequently, social norms, as well as the important role of culture, heterogeneously promote consumer behavior. For example, while Asian countries have connected the strict and culpable rules on social distancing and isolationas tight societies, the European nations are likely to be freer in prescribing individuals to remain at home; the previous study suggests that the tight culture is related to common disasters, the density of population, andinvasions. As a result, these nations will collaborate to keep individuals together during the social crisis [21].

# 2.1. Mobile Payment in China

Mobile payment services are a compilation of technologies that give shoppers the capacity to completemonetary transactions. Financial esteem is exchanged over versatile terminals to the recipient, employing the utilization of a versatile gadget (Lu et al.). It is referred to as a payment process whereinone section of a transaction is executed to use a mobile device and ensure securefinancial transaction processing over a mobile network [43]. In China, there is a cash-centric culture of payment; they are not regular users of checking and credit cards, and the mobile marketplaceattempts to illustrate that, if consumers progressfrom traditional payment to mobile e-commerce, the habit of payment does not change [44]. In China, the mobile payment platform is spreading its services. According to the China Internet Network Information Center (CNNIC), in China, more than 600 million people used mobile payments in 2019. Many people are also favorable to use m-payment when shopping offline. About 406 million customers ordered food by internet payment in 2017, an 18.2 percent increase of the previous year; 397 million people did soon mobiles, a 23.2 percent increase of the previous year. However, consumer choice and social distancing behavior are the most potential origin to accept mobile payment services, so, in this research, we exploit the construal level and mental accounting theory to support a significant adoption of m-payment in China. Our conceptualization, drafting from previous motivation, explores the suggestion that individuals' motivation to seek challenges in cross-cultural environments is more totally and cogently represented when cross-cultural self-efficacy and intrinsic inspiration are considered together [17]. In contrast, studies have shown that motivational attributes similar to the cross-cultural inspiration that generalize over errand settings can emphatically promote adjustment forms [12].

# 2.2. Culture and Social Distancing in the Aspect of M-Payment Adoption

In the view of the current situation, i.e., the COVID-19 global pandemic, social distancing refers to people keeping a set distance from someone they meet or communicate with, as well as keeping distance with, other people they may be near. According to Montinari

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and Rancan (2020), it can be significant, whereas the degree of social distance between manual decision-makers and users is influenced by the decision, such as between seller and buyer. In culture distancing, new motivation and intentiondepend on cultural distance engagement, mental health, and social health [45]. From this point of view, this incorporates a partial association with the social measurement, as individuals who come from individualism allocate the social distance according to the administrative recommendations [46]. Hence, we have three primary measurements to capture the social distancing of individuals over the world. Specifically, we utilize four main cultural measurements pertinent to social distancing [21].

In Hofstede's cultural dimensions, the measurement is applicable that society has a stratum of power and wealth among the common people of any country, culture, and business. It can be a coordinated impact on the behavioral intentionof individuals, and there is a high hierarchical distance in many developing countries of Latin America and Africa, but ashort hierarchical distance in places such as Canada, wherein Quebec is a state [7]. People who are in an individualistic society are anticipated to be different, as people, compared to those with afaithful association to a life-long group(for example, amplified family, companion, etc.) (Huynh 2020) and its opposite side to collectivism. In a collectivist culture, compliance with the devotion to community appears as a fundamental attribute, and it can be contended that the manner of such constraints limits personal activity [47].

# 2.3. Uncertainty Avoidance Index (UAI)

In society, a high tolerance for uncertainty towardsinstability is characterized by benchmarks communicated with numerous options, the acknowledgment of deviant behavior, and majority suppositions [7]. The consequences of addressing this sense of uncertainty are that individuals will tend to take after the same rules and do the same activities [7]. In such social order, it appears likely the acceptance of innovative advancement will generally depend on its traits to control or screen uncertainty. However, this component represents that society is anxious dubious, obscure, and unstructured condition. As a result, this intermediary can capture culture's perception in an equivocal context in decision-making [21].

# 2.4. Construal Level and Mental Accounting Theory

According to construal level theory, people would be satisfied, and make farbetter choices, when distance matches the choice issue. The idea of congruency between distance and the choice issue is closely related to influence [48]. CLT suggests that to improve enticement, the message has to emphasize higher-level aspects and allude to choices around distal entities—future times, other places, and theoretical events. There is a different type of psychological distance upon which this study focuses on the social distance that seems significantly relevant to consumer choice. When distance matches the sort of choice issue, a consumer would be satisfied and make better choices [49]. Expanding the detailed spatial distance of social events should have impacts on mental characterization similar to those of increasing distance on the different types of psychological distance [50]. The mental accounting theory indicates user strategic decision policy affiliated to transaction attribute [6]. Additionally, it claims that the consumer dissects transactions into sections: determination stage, or evaluating potential deal; and decision stage, or approving potential deal [51]. To utilize mental accounting theory, the user assesses different outlooks according to the ability of each prospecttoresist some limiting difficulties consisting of selecting that prospect [51]. When due to make their purchase decisions, a customer can make their decisions and maximize utility concerning the mental account for that being purchased [52]. In this regard, our ideology of cross-cultural motivation is not different from other multidirectional motivational constructs (e.g., empowerment of consciousness); it is related to increasing both predictive validity and conceptual parsimony [17]. The social determinants play an imperative in controlling contamination behavior [21]; when mobile payment appears to accept new technology, consumers face difficult decisions.

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## 3. Theoretical Framework and Hypotheses Development

In this segment, we explore our theoretical model (see Figure 1) and emphasizeour hypotheses, which explainsour expectations around the direct and circuitous association between the constructs of the research model.

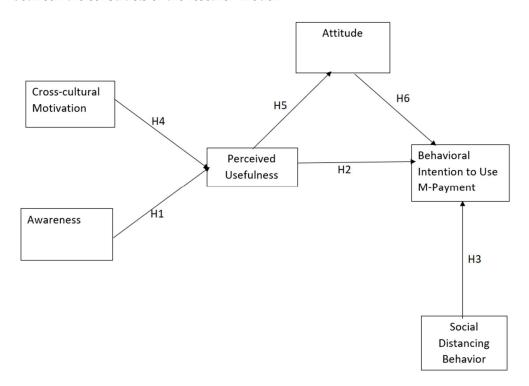


Figure 1. Proposed research model.

# 3.1. Awareness

Awareness is characterized as the communication technique that makes consumers conscious of the benefits and utility of innovative technology and motivates them to buy and utilize new technology such as an m-payment system [53,54]. Merchants think that consumers' awareness of innovative technology impacts their behavioral intention. Additionally, the customer is concerned about the loss of personal information, misuse of personal data, and control of personal information by the third-party agent; therefore, they may try to avoid the use of technology [23]. Thus. it is noted that awareness has a significant and strong influence on the customer behavioral intention to use mobile payment, and it will be very beneficial to have a smart tendency to adopt cashless transactions [55–61]. Stepcic and Salah (2016) found a strong relationship between awareness and perceived usefulness of innovative technology, and m-payment service providers shouldbe prepared to utilize technologyearlyby assessing customers' awareness and intention. In the m-payment system, financial awareness and building confidence are considered important roles for the acceptance of innovative technology [19]. As a result, we postulate that awareness has a good influence upon the perceived usefulness of m-payment, and that new users will also influence and tendency to adopt it. We found a strong and significant association between awareness and usefulness of m-payment technology [62], and a suggestion that, by evaluating consumer awareness of a system, the merchants or agents can be able to prepare to use innovative technology. Therefore, this relationship can be formulated as follows:

**Hypothesis 1 (H1).** Awareness significantly influences the usefulness of adopting a mobile payment system.

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## 3.2. Perceived Usefulness

Davis, Bagozzi, and Warshaw (1989) suggestthat perceived usefulness refers to consumers' conviction about the relative benefit obtained from the use of an innovation. This indicates that when it stipulates a relative advantage after that, general consumers will oftendecide to use mobile payment. This dominance might improve the productivity or efficiency of production. In a cross-cultural study, it is a significant predictor of behavioral intentionto use digital commerce [63].

Based on the online environment, perceived usefulness will showthat the utilization of specific innovation may be valuable to potential consumers in achieving a specific result [64–66]. The degree that consumers accept that online transactions by internet payment will provide valuable information, convenience in comparison to others, and speed up the shortcut purchase process [67]. In mobile payment systems, different studies demonstrated that a user realizes the highest level of usefulness when the consumer intends to use m-payment service [23,67–72]. In the adoption of mobile payment technology, perceived usefulness is the most widely studied factor. Therefore, we propose the following:

**Hypothesis 2 (H2).** *Perceived usefulness has a positive impact on the behavioral intention to use a mobile payment system.* 

## 3.3. Social Distancing Behavior

In this research, social behavior is examined by a global variable [19], which is entailed from two dimensions. Social distancing is the first dimension, which is measured by the uncertainty avoidance index, and this index predicts those people who are less likely to gather in a public placesuch asretail grocerystoresandtheworkplace [21]. We consider this dimension in the mobile payment context. Therefore, a recent study emphasizes that the outbreak of COVID-19 will be controlled due to changing human behaviors [3]. Social distancing has a positive influential social factor [73] that can be determined and reduce the transmission risk from this pandemic disease [74]. Furthermore, in the m-payment context, if the user adapts their behavior to use cashless payment and maintain the social distancing practice, then it might be easier to cope up with this global crisis.

Moreover, social influence is associated with more prominent social distancing, whereas motivation concerning parental rules and there beingno alternatives interact with less social distance [45]; when abuyer wantsto shop in a public place, it is better to use cashless payment in the global pandemic and also post-pandemic period. It is somewhat controllable by social distancing, as are probabilities, and relation to valance is also a vital discrepancy among the distances [49]. In contrast, the social distance would influence the manner of a user to represent specific information and events [44,75] although social behavior is recognized to proliferate through continuous interactions [76]. However, the following studies agree and emphasize that there is a need to follow physical distance in retail stores and city centers; avoiding social crowds and the workplace is a very effective way to reduce transmission [37,77,78] and this distance is the well-being of the public [79]. Kaba et al. (2009) recognized that there is a positive and significant relationship between social influence and intentionto use innovative technology.

**Hypothesis 3 (H3).** *Social distancing behavior positively and significantly influence behavioral intention to use m-payment.* 

# 3.4. Cross-Cultural Motivation

According to the preceding discussion, this study proposes the research model to be given in Figure 1, which suggests the motivational characteristic of behavioral intentionin the m-payment context. The overall assessment of m-payment characteristics represents a focal behavioral intention to adopt as a total utility. Motivation consists of the process of psychology that identifies the persistence of action, direction, work intensity, and, more specifically, users who are intrinsically interested in their work [17]. Drawing on the work

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motivation theory of Ang et al. (2007) we developed the idea of motivational culture that one is captured by both cross-cultural self-efficacy and intrinsic cross-cultural motivation. Although we use the term "cross-cultural motivation," it followswork on motivational culture intelligence and refers to this factor beingmore consistent with the theoretical focus on user motivation, rather than real capabilities [17]. In this study, we examine crosscultural motivation in the m-payment context. However, the decision-making stage refers to deciding to transfer their behavior tom-payment, subject to budget allowanceallocated to a respective account. In line with prior research, expatriates with higher cross-cultural motivation will be proactively direct, and erect efforts toward adapting to their international task and duty. Due to their greater interest and efficacy in adapting to another culture, they are more likely to engage in the different working ways in their host country. In a single international assignment, cross-cultural motivation is less likely to be influenced by job adjustment, and it is not specific to an international task or cultural context [80]. Comparatively, motivational attributes are quite similar to cross-cultural motivation that generalize across the job settings and can emphatically advance the alteration process [12]. There is proof that motivational character is the same category as cross-cultural motivation which can boost the behavioral intention or adaptation processes by work adjustment [78]. We explore the usefulness of mobile payment and work adjustment that can motivate consumers'intention to use. Thus, we predict:

**Hypothesis 4 (H4).** Cross-cultural motivation positively and directly influences perceived usefulness and indirectly influences intention to use mobile payment.

#### 3.5. Attitude

Attitude is the degree to measure that someone has a positive or negative assessment about behavior in address [24]. It has been utilized across important hypotheses of IT adoption including TRA, TAM, and DTPB [31] to assess its impact on behavioral intention. Prior studies demonstrated that m-payment environments have a significant relationship between behavioral intentionand attitude toward using m-payment, and there is a significant and positive relationship between user attitude and intentionto use m-payment services [81,82]. In addition, there is a significant and positive influence between perceived usefulness and user attitudes [31].

**Hypothesis 5 (H5).** *Perceived usefulness positively influences attitude towards using m-payment services.* **Hypothesis 6 (H6).** *Attitude positively influences behavioral intention to use m-payment services.* 

# 4. Research Methodology

In this study, the target respondents are international students in China. The present study adopted the quantitative research to find the appropriate relationship between the independent variable, moderating variable, and the intention to use mobile payment as a dependent variable, and investigated scales and items from previous studies of m-payment adoption available to validate the latent variable [51,83]. For the design and layout of the questionnaire survey, researchers must be vigilant when planning, asit is very important to the success of the study to have asurvey questionnaire with a good structure. In the very beginning, we collected information about the user concept of mobile payment and some major challenges to adopting m-payment for newly arrived international students. Then, we made a group discussion regarding the data collection issue. After that, we prepared the scale and item; it took around one month. The questionnaire survey made in our study was divided into two sections. The first section consists of the knowledge on m-payment, and asksabout their experiences and their demographic information such as education level, age, gender, region, religion, living city, andmobile payment usages, displayed in Table 1. The second section includes the main scale and item of our main construct, specified through a similar construct-related study. The questionnaire scales and items are shown in the Appendix A. All measurement was developed in seven-point Likert scale, where 1

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indicates "Strongly Disagree," and 7 indicates "Strongly Agree". We validated the survey questionnaire by pilot testing with 81 respondents located in Wuhan and Zhengzhou province in China to rectify the reliability, validity, and scalability of the behavioral scales.

**Table 1.** Descriptive Statistics of Participants.

Demographics		Frequency	Percentage
Edu	Bachelor	114	27.9
	Master	185	45.2
	PhD	87	21.3
	Others	23	5.6
Gender	Male	309	75.6
	Female	100	24.4
Age	Under 20	34	8.3
0	21-30	253	61.9
	31–40	119	29.1
	Above 40	3	0.7
Region	Asia	335	81.9
region	Africa	43	10.5
	European	5	1.2
	Union	3	1.2
	Eastern	10	2.4
		10	4.4
	Europe	0	0
	North	0	0
	America	2	0.7
	South	3	0.7
	America	10	2.0
	Middle East	12	2.9
	Oceania	0	0
	Others	1	0.2
Religion	Islam	204	49.9
	Christianity	38	9.3
	Buddhism	147	35.9
	Hinduism	7	1.7
	Others	0	0
	Nothing	13	3.2
For how many years haveyou used internet	Less than 3	269	65.8
payment before entering China	years		
	3–5 years	73	17.8
	5–8 years	33	8.1
	Above 8 years	34	8.3
For how many years haveyou used mobile	Less than 3	291	71.1
payment before entering China	years		
	3–5 years	65	15.9
	5–8 years	32	7.8
	Above 8 years	21	5.1
In which city are you living in China	Wuhan	307	75.1
and the second s	Zhengzhou	7	1.7
	Nanchang	4	1
	Guangzhou	78	19.1
	Nanjing	0	0
	Kunming	0	0
	Beijing	6	1.5
	Others	7	1.7
Have you ever participated in a mobile	Yes	244	59.7
	No	2 <del>44</del> 165	59.7 41.3
payment experience in your country	INU	100	41.3

Formeasurement, the constructs were adapted from the existing literature. Items on cross-cultural motivation were adapted from [17,41]. Measures of perceived usefulness were adapted from prior research [28]. Five items on awareness were adapted from [19,23]. Finally, the social distancing behavior scales were adapted from [19,73,80,84]. Four items

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on intention to use were adapted from [25]. The empirical data was collected through a web-based questionnaire survey, and it is noted that the questionnaire survey is mostly used in the research of information technology [85]. In total, 409 valid responses were collected, which is achieved by the minimum sample size. Moreover, the present sample size also accomplished minimum criteria [86]. This is also considered perfect for using structural equation modeling.

#### 5. Results

## 5.1. Descriptive Statistics

In this study, we received 409 respondents, and in terms of age, 60.7% of the respondents are 21–30 years old. In addition, the majority of the respondents are male(76.2%). A total of66.6% of culmulative respondents used internet payment before entering China, and 71.4% of students usedmobile payment before entering China. In terms of nation/region, 81.9% of international students were from Asia, 10.5% from Africa, and 7.6% from other regions/nations. Finally, the majority of international students live in Wuhan city(75.1%). As mentioned in Table 2, the cross-loading for all indicators is significant.

Table 2.	Cross-load	ding for	all i	ndicators.
Table 2.	C1055-10a	anig ioi	ант	naicators.

	Component						
	1	2	3	4	5	6	
SDB5.4	0.823	0.004	-0.023	-0.012	-0.074	0.160	
SDB5.5	0.810	0.021	-0.095	0.179	0.199	0.100	
SDB5.1	0.800	0.011	0.040	0.086	0.098	0.095	
SDB5.3	0.774	-0.047	-0.050	-0.030	0.088	0.206	
SDB5.2	0.762	0.027	-0.004	-0.021	0.007	0.442	
CCM2.5	0.017	0.878	0.152	-0.047	-0.009	-0.006	
CCM2.4	0.042	0.868	0.153	0.005	0.026	0.051	
CCM2.3	-0.041	0.854	0.083	-0.003	0.146	0.006	
CCM2.2	0.082	0.848	0.160	0.036	-0.001	-0.052	
CCM2.1	-0.067	0.695	0.026	0.013	0.117	0.034	
PU3.1	-0.017	0.124	0.883	0.106	0.068	-0.011	
PU3.2	-0.010	0.153	0.851	0.163	0.224	0.101	
PU3.4	0.006	0.134	0.842	0.181	0.162	-0.135	
PU3.3	-0.152	0.208	0.771	0.211	0.260	0.006	
AT9.1	0.097	-0.048	0.119	0.866	0.062	-0.021	
AT9.4	0.048	0.068	0.206	0.848	0.230	0.019	
AT9.5	-0.001	-0.019	0.244	0.840	0.009	-0.037	
IU6.1	0.282	0.055	0.060	0.223	0.774	0.059	
IU6.6	-0.117	0.157	0.460	0.172	0.702	0.106	
IU6.4	0.251	0.120	0.349	-0.174	0.655	-0.070	
IU6.2	-0.038	0.082	0.479	0.226	0.613	-0.124	
AW4.1	0.325	0.028	0.080	0.085	-0.140	0.839	
AW4.2	0.475	-0.002	-0.064	-0.069	0.152	0.702	
AW4.3	0.516	0.021	-0.122	-0.117	0.050	0.695	

# 5.2. Common Method Bias

Our study also followed Harman's single factor to rectify the Common Method Bias problem, with seven constructs (cross-cultural motivation, perceived usefulness, awareness, social distancing behavior, and intention to use) significantly carried out and loaded into a single variable. We found that 36.6% is the value of a single factor, which was far smaller than the recommended value of 50%. Therefore, there is no common bias concern issue in our research factor.

# 5.3. User Attitude as a Mediator

We examined bootstrapping with 409 observations and samples for bootstraps. Adheringto Baron and Kenny, we used two tests of mediating effect. Firstly, we investigated

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the total direct effect of the relationship between perceived usefulness and behavioral intention to use m-payment; there was no mediating effect of user attitude. In the second step, our research model ranwith user attitude as a mediator, and we estimated that the total direct and indirect effects of bootstrap samples were significant. We also calculate-davariance accounted factor of 62%, whereas 100 percent denotes full mediation—the mediation effect of user attitude, regarding path significant at p < 0.01. The mediation effect is presented in Table 3a–d.

**Table 3.** (a) Direct effect (mediation) on behavior intention to use. (b) Indirect effect (mediation) on behavior intention to use. (c) Total effect (mediation) on behavioral intention use. (d) Total Effects—Two-Tailed Significance (PC).

		(a)		
	Social Distancing Behavior	Perceived Usefulness	Awareness	Attitude
Attitude	0.000	0.330	0.362	0.000
Social distancing Behavior	0.027	0.000	0.082	0.413
		(b)		
	Social Distancing Behavior	Perceived Usefulness	Awareness	Attitude
Attitude	0.000	0.000	0.000	0.000
Social distancing Behavior	0.000	0.136	0.150	0.000
		(c)		
	Social Distancing Behavior	Perceived Usefulness	Awareness	Attitude
Attitude	0.000	0.330	0.362	0.000
Social distancing Behavior	0.027	0.136	0.232	0.413
	(	(d)		
	Social Distancing Behavior	Perceived Usefulness	Awareness	Attitude
Attitude	•••	0.010	0.010	
Social distancing Behavior	0.010	0.010	0.010	0.010

Sources from IBM AMOS 24.

#### 5.4. Measurement Model

We first inspected the measurement model and tested the reliability and validity of the construct. At that point, we inspected the structural model and tested the hypotheses. Our study employs the AMOS Graphics and SPSS version 24.0 software to analyze the conceptual and SEM model. After evaluating the Exploratory Factor Analysis, we checked the common matrix factor analysis.

We examined boththecomponents factor analysis and confirmatory factor analysis to evaluate the scales' reliability and validity. The Kaiser–Meyer–Olkin(KMO) degree of sampling adequacy in the behavioral intention stage was 0.825.

Moreover, we have conducted a confirmatory factor analysis to examine the measurement model. This included the appraisal of internal consistency reliability, and examination of discriminant validity and convergent validity for construct validity. Cronbach's alphas were all above 0.8, showing great reliabilities of the scales in Table 4. The composite reliabilityscores are all-around 0.8, and AVE scores are allgreater than 0.6, indicating good convergent validities. This study also satisfies the criteria of discriminant validity exhibits in Table 5.

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Construct	Cronbach's Alpha	AVE	CR	FL Range	MSV	MaxR(H)
Cross-Cultural Motivation	0.909	0.643	0.899 **	0.82-0.86	0.121	0.915
Perceived Usefulness	0.904	0.712	0.881 **	0.82 - 0.86	0.587	0.883
Social DistancingBehavior	0.886	0.613	0.826 ***	0.74-0.82	0.593	0.83
Awareness	0.861	0.632	0.837 ***	0.76 - 0.82	0.593	0.84
Attitude	0.879	0.678	0.863 **	0.79-0.86	0.21	0.867
Intention to Use	0.852	0.625	0.833 ***	0.72 - 0.84	0.587	0.842

Table 4. Reliability and Validity (Cronbach's Alpha, AVE, and CR) and factor loadings.

Note. \*\*\* p < 0.001, \*\* p < 0.010, and \* p < 0.050; CR = Composite Reliability, AVE = Average Variance Extracted, FL = Factor Loading, MSV = Maximum Shared Variance, and ASV = Average Shared Variance.

Table 5. Correlation	matrix of all	constructs and AV	VE square root	(in bold).

	CCM	PU	SD	AW	AT	IU
ССМ	0.802					
PU	0.348 ***	0.844				
SDB	0.013	-0.079	0.783			
AW	0.026	-0.147*	0.770 ***	0.795		
AT	0.054	0.458 ***	0.166 **	-0.05	0.823	
IU	0.301 ***	0.766 ***	0.105 †	0.026	0.451 ***	0.79

Note. \*\*\* p < 0.001, \*\* p < 0.010, \* p < 0.050 and † p < 0.10; Main diagonal: in bold square root of the AVE; CCM = Cross-Cultural Motivation; PU = Perceived Usefulness; SDB = Social Distance Behavior; AW = Awareness; AT = Attitude; and IU = Intention to Use.

We have compared the square root value of the AVE and its correlation with other constructs for discriminant validity. The square root of the AVEs are greater than the corresponding correlation coefficients, indicating good discriminant validity. The measurement model result indicates strong evidence of the measure of the construct signified by their internal consistency reliabilities, as shown by their composite reliabilities presented in Table 4.

All the variables had Cronbach's Alpha coefficient scores between 0.852 and 0.909, indicating good reliability. Wethenconducted an exploratory factor analysis in Table 2 whichindicated good factor loading. Moreover, we conducted a confirmatory factor analysis to further estimate the measurement model. This included the evaluation of internal consistency reliability. For construct validity, we evaluated convergent and discriminant validity. Our good fit indices as CMIN = 3.569, CFI = 0.921, GFI = 0.884, AGFI = 0.839, RMSEA = 0.078, and PNFI = 0.810. All the factors of composite reliability are greater than 0.85, and the average variance extracted is at least 0.613. The square root of the AVE is more prominent than its comparing correlation coefficient values, and maximum shared variance (MSV) and average shared variance (ASV) is less than AVE; subsequently, the scale's discriminant validity is significant.

### 5.5. Structural Model

After assessing the model fit of the SEM analysis, the path relationship within the model wasverified, and we examined the R square of the endogenous variable. We ran the bootstrapping process and checked the significance of the 409 samples path coefficient by entering the replacement method, and our good fit indices AGFI = 0.809, CFI = 0.912, GFI = 0.901, RMSEA = 0.078, and PNFI = 0.810 provedto be inside their anticipated edge values. In the structural model, we have checked the R square value of each endogenous variable. The  $\rm R^2$  value of perceived usefulness is 0.23, while the  $\rm R^2$  value of attitude is 0.30, and user intention to use m-payment is 0.342. The path analysis results are reported in Table 6. Our key findings displayed that cross-cultural motivation and intentionto use havebeen significantly and positively influenced. Additionally, social distancing behavior

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and intention to use have a positive influence on the use of mobile payment. Therefore, it confirms and supports H1 (b = 0.36, p = 0.01) and H2 (b = 0.54, p = 0.00). Additionally, the result revealed that social distancing behavior, perceived usefulness, and awareness positively and significantly influence consumers' intention to use mobile payment services. Therefore, the finding confirms and supports H3 (b = 0.18, p = 0.00), H4 (b = 0.34, p = 0.00), H5 (b = 0.40, p = 0.00), and H6 (b = 0.70, p = 0.05).

Table 6.	Eva	luation	of structura	l model

Hypotheses	Relationships	Path	T-Value	<i>p</i> -Value	Result
H1	AW < PU	0.36	8.679	0.01	Supported
H2	PU < BINT	0.54	14.332	0.00	Supported
Н3	SDB < BINT	0.18	5.643	0.00	Supported
H4	CCM < PU	0.34	6.635	0.00	Supported
H5	PU < AT	0.40	8.468	0.00	Supported
H6	AT < BINT	0.70	4.709	0.05	Supported

Note: PU = Perceived Usefulness, AT = Attitude, CCM = Cross-cultural Motivation, AW = Awareness, SDB = Social Distancing Behavior, and IU = Intention to Use.

The result signified that perceived usefulness has a significant and positive impact on user intention to use mobile payment. This finding is in agreement with the previous studies [23,67,68,70–72], where it could be explained that the higher the use of mobile payment system, the greater the user intention is to use it.

# 6. Discussion

The current study explores the significant factor influencing consumer intention to use mobile payment systems. In this section, we have synchronized the findings in line with the previous study and examined the relevant hypotheses.

The first hypothesis showed that cross-cultural motivation significantly influences the user intention to use mobile payment. Notably, this result complies with the finding observed in previous studies [17,76] in which cross-cultural motivation significantly relates to job performance. Prior studies have been implicative of work adjustment as a mediating factor between expatriate motivation and performance [87,88]. From the perspective of international students in China, we demonstrate the perceived usefulness of m-payment as a mediator between cross-cultural motivation and user intention to use it. Similarly, an international student has higher behavior intention to use m-payment when they have higher levels of cross-cultural motivation. Therefore, the finding supported our expectations that cross-cultural motivation contributed to improved user intention to use mobile payment.

Concerning the influence of awareness on user intention to use mobile payment, the results highlighted that awareness has a significant and positive influence on consumer intention to use mobile payment. Similarly, these findings are consistent with the result of prior studies [19,55,58,60]. Therefore, it could be explained that the higher the awareness of the mobile payment system, the more likely the consumer's intentionto use it. The increased awareness and use of mobile payment during COVID-19 has also been able to control the rapid spreading of the deadly virus. The widespread adoption of m-payment technology has enabledthe population to maintain their practices and adjust to the acritical pandemic time. We examined perceived usefulness as a mediator between awareness and behavioral intentionto use m-paymentand found a significantly positive impact on the useofmobile payment. The higher the perceived usefulness of m-payment, the greater the awareness of the m-payment system.

In our study, social influence is examined by a global variable, which is social distancing behavior. Despite behavior, the intention a swift deciding factor that impressions an individual's characteristics and TAM has acquired extraordinary support in explaining consumers' acceptance in various domains [89]. The findings of thepath coefficients

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(Figure 2) demonstrated that there is a positive impact of social distancing behavior on consumer intention to use mobile payment. Remarkably, this result is in line with the outcomes derived in the following studies [3,45,49,73,74,90]. The impact of social distance on m-payment is robust, and there is a good chance to pay attention to decision-making on mobile payment.

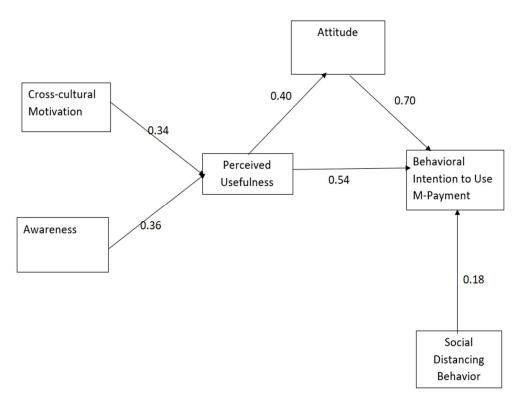


Figure 2. Structural model.

# 6.1. Theoretical and Practical Implications

In the literature, the main models proposed, the theory of respond action, the model of motivation, technology acceptance model, construal level theory, the theory of plan behavior, and innovation diffusion theory, all suggest that a consumer believes that the characteristics, opportunities, and features offered by m-payment systems explain and emphasize their adoption and intentionto use it. However, our data analysis illustrates that international students' beliefs on m-payment's usefulness lead to intention to use mobile payment. Additionally, prior research suggested that work adjustment is a mediator between cross-cultural motivation and job performance [12]. Our multisource and design allowed us to demonstrate that cross-cultural motivation predicts intention to use m-payment through usefulness. Although cross-cultural motivation has a positive emotion, according to social exchange theory, social behavior is an exchange process, and after gainingmotivation from a cross-cultural perspective, international students can easily adapt to the mobile payment system. By construal level theory and Hofstede's (Uncertainty Avoidance) cultural dimension, we empirically demonstrated the relation between social distance and user intention to use m-payment technology. Moreover, we considered incorporating only one dimension (uncertainty avoidance) of Hofstede's cultural theory into our theoretical framework. The empirical findings indicate that our conceptual proposed model can be significant and effective in explaining user intention to use the m-payment system. This study is the first attempt in the COVID-19 context that measures international students' intention to use this innovative m-payment technology. It clearly shows that usefulness and cross-cultural motivation, and the social distance and awareness of m-payment, are key drivers for adoption by consumers. By assimilating this construct into the TAM model, perceived usefulness is speculated to significantly influence the behavioral demand [91]. Sustainability **2021**, 13, 10676 15 of 20

Moreover, none of the existing studies included the social distancing behavior construct to realize the adoption of mobile payment. The positive effect of encouraging conditions on exertion and behavioral intentions demonstrates that m-payment service agents and providers should execute support programs, which may conduct better appreciation and utilize portable apps by users. This study alsoexaminesthe consciousness of merchants on m-payment services and intentionto change their business model. The m-payment is very easy to access, so during COVID-19 their flow of transactions and income is also increased. Based on cross-cultural motivation, the merchant can promote their m-payment services to achieve the highest level of end-user satisfaction. The positive influence of attitude to use m-payment and behavioral intentions can drive service providers to open up user-friendly mobile applications.

This study is the first to address the significant factors affecting them-payment adoption of international students in China. The findings of our study also propose several recommendations and suggestions for researchers in m-payment system developers or senior administration to encourage more prominent acknowledgment dissemination of mobile payment systems, practitioners, and diffusion of mobile payment systems. Those developers of m-payment have to arrange social campaigns for awareness to make the new users aware of the hazard that might appear during the financial transaction using the mobile payment system. It is also confirmed that cultural determinants have a significant role in controlling infection behavior. Mobile providers, policymakers, ICT industry players, and public health strategies should play a vital role in maintaining social distance and reducing social gathering by the 'uncertainty avoidance' factor of our research model. Service providers and policymakers should realize the different behaviors between different groups of people in m-payment services and take the different initiatives to manage them.

During COVID-19, people are adapted to use m-payment, and it is quite realistic. As per the "ratchet effect of the economy", even if the king loses his kingdom, they do not change their habits. Therefore, the attitude to the use of m-payment services will persist post-COVID-19. After this pandemic, consumersare also habituated to use this kind of behavior. Therefore, this study contributes to and suggests theuse of sustainable m-payment services.

# 6.2. Limitations and Future Research Directions

Despite hypothetical and practical implications, this study is also subject to limitations. First, this study applied a non-probability sampling method to examine factors and to collect potential data from a few areas and specific universities in China. In that case, it should be beneficial for future studies to examine probability sampling. The second limitation is that this study used only one cultural dimension to employ the relationship between culture and motivational behavior for adopting an m-payment system. However, it should be useful for future studies to measure mobile payment adoption in different cultural dimensions. Third, this study employed one dimension of Construal Level Theory (CLT), that is, social distancing behavior, and, although it is the potential behavior in future studies, researchers shouldtry to employ the other two dimensions on mobile payment adoption. Fourth, the findings of the study suggest that the usefulness of m-payment plays a mediating role between awareness and behavior intention to use m-payment. Future studies should examine a different type of factor as a mediator in the m-payment context. Fifth, the number of measurement items might not be suitable, assome of the items had to be removed during the model analysis to confirm the fitness of the data. Sixth, this study conducted the survey sample from international students in China, but most of them are from Asia(81.9%). Future research should imitate the findings with data sampled from other groups of international students and different backgrounds. Future researchers should consider the Unified Theory of Acceptance and Use of Technology (UTAUT) as a theoretical framework. Moreover, our sample size is not large scale and, due to the pandemic, we were unable to collect data physically. It would also be more interesting if our findings could address the moderating effect of gender, age, level of income, etc., on

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the relationship of cross-cultural motivation and perceived usefulness to use m-payment. Finally, this study did not underpin cross-country analysis. Therefore, this would also be a pathway of the future avenue of research.

## 7. Conclusions

In this study, we examined the motivational characteristics, including the behavior of social distancing, and highlighted the influence of cultural differences on m-payment adoption. First, we employed Kaba and Osei-Bryson's (2013) model to consider the theoretical lens, and we explored extending the model with the following construct: cross-cultural motivation, usefulness, awareness, and social distancing behavior to be more significant and relevant for international students in m-payment context. We tested the empirical model among 409 participants to rectify the significant determinants of consumer behavior intention to use mobile payment. Our findings pointed out that, besides awareness of m-payment technology, the practice of social distancing behavior during the COVID-19 crisis is significantly influenced theadoptionofthe m-payment system. In addition, we used the bootstrapping method and tested the mediation effect of perceived usefulness suggested by [92] to confirm the mediation effect of perceived usefulness on user intention to use m-payment [93,94]. The mediation effectwas theacceptance or rejection of an m-payment service by the user. To conclude, the findings of this study suggest that the motivational characteristics, including the efficiency of social distancing behavior and cultural dimension, play an important role in the adoption of mobile payment. Though the empirical focus of the studywas the international student, whose age are usually below 40 years, the outcomes of the study also impact the elderly people. Although elderly people might have perceived fear of technology [6], they are also encouraged to use m-payment. Even during COVID-19, World Health Organisation (WHO) suggests elderly peoplestay at home and perform their daily activities at home. In this case, they have increased relianceon technology usage (i. e., m-payment services), afurthermotivatorfor the elderlyto adopt the technology. Finally, we are strongly recommending m-payment services to combat the COVID-19 [22].

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# Appendix A. Questionnaire

Constructs	Measurements Items	Sources	
	I am confident that I can socialize with locals in a culture that is		
	unfamiliar to me.		
	I enjoy interacting with people from different cultures.		
Cross Culture Motivation	I am sure I can deal with the stresses of adjusting to a culture that is	[17,41].	
Cross Curvare Man Man Man	new to me.	[17/11].	
	I enjoy living in cultures that are unfamiliar to me.		
	I am confident that I can get accustomed to shopping conditions in a		
	different culture.		
	I received enough information about the benefit of the m-payment		
	system.		
	I received never received information about the m-payment system.		
Awareness	M-payments awareness is high among the consumer.	[19,23].	
	Consumers are aware of the use of the m-payment system effectively.		
	Consumers are aware of the privacy aspects of the		
	m-payment system.		
	I believe that in my daily activities mobile payment would be a useful		
	service.		
Perceived Usefulness	It saves time when I use mobile payment for paying.	[00]	
rerceived Oserumess	It makes my daily transaction more convenient.	[28].	
	It could increase daily transection efficiency.		
	It would increase my productivity.		
	Social distancing globally reduces the spread of COVID-19.		
	Social distancing is a public good under the COVID-19.		
	The positive impact of social distancing in reducing the risk of		
Social Distancing	transmission of COVID-19.	[74,95].	
_	Social distancing increases hygiene procedures.		
	Social distance can be voluntary at the individual level.		
	Social distance can be voluntary at the community level.		
	Using m-payment systems is a wise idea.		
	Using m-payment systems is pleasant.		
Attitude	I like the idea of using m-payment systems.	[82].	
	Using m-payment systems is beneficial.		
	Using m-payment systems is interesting.		
	I will always try to use mobile payment systems in my daily life.		
Behavioral Intention to use	I plan to use mobile payment systems frequently.	[04]	
benavioral intention to use	I will recommend others to use mobile payment systems.	[94]	
	I predict that I would use mobile payments.		

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