Cross-cultural comparison of m-commerce adoption between developed and developing countries: A literature review

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Abstract

The purpose of this paper is to report a review of literature that dealt with the factors affecting m-commerce adoption, and comparing the reported differences in outcomes between developed and developing countries. 42 empirical research papers reporting on these key factors were examined, and categorized into either developed or developing countries in order to compare the outcomes. On average the outcomes of these studies were found to be more contradictory in developing countries than in developed countries; particularly for some key factors such as perceived ease of use, awareness, self-efficacy and enjoyment where disagreement was the highest in developing countries. Also, some factors were found to be studied in developing countries but never studied in developed countries and vice versa. We suggest that more research is required on the factors that resulted in contradictory findings.

Keywords: m-commerce, e-commerce adoption, key factors, developed and developing countries.

1. Introduction

M-commerce is defined as mobile e-commerce¹. According to Paavilainen m-commerce is the exchange of goods, services and information using mobile Information and Communication Technology². M-commerce has evolved through the convergence of the two fastest growing industries – the internet and mobile communication³. The fundamental characteristics that differentiate m-commerce from e-commerce are ubiquity/anywhere anytime, personalization and convenience^{4, 25}. Based on these differentiators m-commerce is seen to be more than e-commerce since it is capable of providing almost all the services offered by e-commerce with the addition of mobility³.

A mobile phone was considered a luxury or a sign of high social status in the past, but has evolved to be a necessity at present⁵. Today the mobile phone has

reached into the hands of 6.8 billion subscribers worldwide where more than half - 3.5 billion out of 6.8 billion - are in the Asia-pacific region²⁹. It has changed the way we do things in our life - transforming the traditional way to m-way such as m-banking, mshopping, m-wallet, m- advertising, m-education, magriculture, m-health, m-entertainment, m-internet, m-GPS etc^{52,62}. With the fast penetration of mobile broadband, climbing from 268 million in 2007 to 2.1 billion in 2013²⁹; smart phones with millions of mobile applications have made m-commerce a great potential business element in the global marketplace. Monetary transaction through mobile phone is growing fast, the volume of which crossed the \$100 billion landmark worldwide in 2011 and is expected to be \$617 billion by 2016⁵². With this growth the number of mobile payment users is expected to grow by 40%, jumping from 1.8 billion in 2011 to 2.5 billion in 2015⁵

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There are many reasons boosting the rapid penetration of mobile phones such as necessities, convenience and ubiquities; but has m-commerce been penetrating at a similar pace? Developing countries are slightly trailing the developed countries in the case of mobile penetration, at 89% versus 128% respectively²⁹; whereas for mobile broadband penetration, one of the key elements of m-commerce, the gap is much wider accounting for 19% in developing countries and 74% in the developed world³⁰. In some developing countries this rate is even lower than the average with examples of 5% in Indonesia, 1.2% in Sri Lanka and 0.9% in India⁵⁰. Therefore it is necessary to identify the reasons behind the low penetration of m-commerce, especially in developing countries, and to investigate the ways to alter that situation.

A large number of empirical studies have been undertaken in various countries to identify the factors that influence m-commerce adoption. Every country is unique in its characteristics but when categorizing them on the factors effecting m-commerce adoption, distinction can be made between developed and developing countries. Some factors that were found to be highly significant in most of the developed countries turned out to be not significant in many countries of the developing world, and vice versa. For example subjective norm and complexity were found to be highly significant by the majority of the studies in developing countries but were found to be the opposite, meaning highly insignificant, in the developed countries. Similarly awareness, self-efficacy, perceived enjoyment, quality, speed, structural assurance and customization were found to have a greater influence on the adoption of m-commerce in most of the developed countries, but were found to be of minimal effect in the developing world. Some additional factors that were studied in many parts of the developed world but not in developing countries include reputation, perceived image, behavioural control, Job relevance, selfexpressiveness, perceived playfulness, mobility, speed, management support and structural assurance. The opposite is also true; meaning some factors were studied in developing countries but not in developed countries. This second set of factors includes perceived credibility, peer influence, mobile skilfulness, perceived elitisation, rich and fast information, standardization and accessibility.

This situation calls for empirical research to study the factors that resulted in contradiction; or have never been studied before either in developed or developing countries. The current literature review has uncovered the research opportunity for the future. The next section will explain the methodology, followed by the research findings, implications, conclusion and finally future research directions.

2. Methodology

A review of literature is usually time consuming, especially in the field of m-commerce as relevant journal articles are scattered across various disciplines such as business, management, marketing, engineering, information technology (IT), and information systems (IS)⁵. To minimize the time and labour 'Google Scholar' was been chosen to be the prime source of searching literature as it is linked with almost all major online journal databases, including Science Direct, Inderscience, Emerald, ABI/INFORM database, ACM digital library, IEEE Xplore, Springer link online libraries, Wiley InterScience, Scopus etc. A number of key words such as m-commerce adoption, mobile commerce adoption and factors affecting m-commerce were used to search the potential literature.

There are many areas of m-commerce, and these have been categorised as mobile commerce applications and cases; wireless user infrastructure; mobile middleware; wireless network infrastructure; commerce behavioural issues; m-commerce economics; m-commerce business models; m-commerce legal and ethical issues; m-commerce overview, context, and usage⁵. The current study did not look at all of these areas of m-commerce research, but rather focused on the particular area of m-commerce behavioural issues investigating how m-commerce diffusion is affected by the consumer's behaviour. Papers published before 2000 were excluded as m-commerce and its associated research has only flourished since 2000⁵. Initially 72 papers were collected based on a key word search. Each article was then reviewed thoroughly to see that it met the essential criteria – an empirical study that identified a number of factors affecting m-commerce adoption. Peer reviewed journals were chosen in the first round of the selection process but conference publications were also included later to enrich the review. The articles that did not match the selection criteria were excluded, and finally only 42 papers remained suitable for the current study.

3. Results and Analysis

Initially the accepted articles were examined and sorted based on the country studied – either developed or developing country as shown in table 1. Later the factors studied in these papers were sorted based on their outcomes, resulting in a list of factors found to be significant or not significant either in developed or developing countries, as shown in Appendix B. The information in Appendix B is also represented as a bar graph in Figure 1 to enable easy comparison between developed and developing countries. It compares the studies of 16 major factors effecting m-commerce

adoption between developed and developing countries, with the number of studies along X axis and factors along Y axis. Dark and gray coloured bars refer to the developed and developing countries respectively. The complete list of studies represented in Appendix B and Figure 1, including the citation of each paper is given in the Appendix C. The definitions of some key factors are also presented in Appendix A.

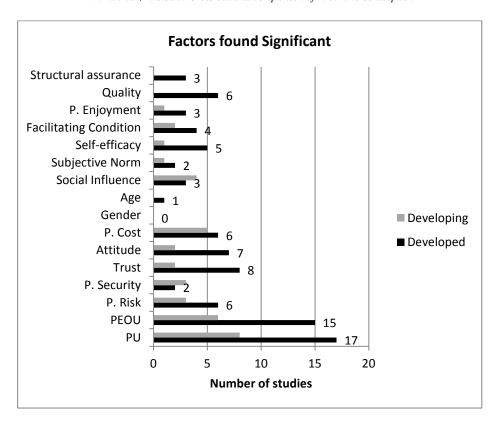
The number of studies of m-commerce adoption is higher in developed countries than in the developing world. Out of 42 papers, 28 were based on developed countries and the remaining 14, in developing countries. In total 59 key factors were studied in those 42 research papers, where the impact of some factors (e.g. Perceived usefulness, perceived ease of use, perceived cost and perceived privacy) were found to be similar in developed and developing countries by a number of empirical studies but in case of many other factors the cases differed significantly (see Appendix C for detail).

Perceived usefulness (PU) was studied in 30

different empirical studies, 20 in developed countries and 10 in the developing world. The majority of these studies gave the same findings for PU; with 17 of the 20 studies (i.e. 85%) in developed countries PU was found to be highly significant in the adoption of m-commerce. In the case of developing countries this ratio is 80% i.e. 8 out of 10 studies found PU to be significant for mcommerce adoption. Another important factor effecting the adoption of m-commerce or other technologies is perceived ease of use (PEOU)⁶; but this was not found to be as significant as PU. The outcome of PEOU was also seen to be contradictory both in developed and developing country studies. The results for PEOU were found to be more contradictory in the developing countries than in the developed countries. 6 out of 12 studies (50%) in the developing world found no link between PEOU and the intention (I) to use mcommerce, whereas in developed countries this ratio is dropped to 37%, meaning 9 out of 24 studies found PEOU to be not significant.

No	Developed country	Developing country
1	M-commerce adoption in Finland ⁸	E-govt. adoption in Kuwait ²⁷
2	E-govt. adoption –US ¹⁰	M-banking adoption in India ⁹
3	M-commerce adoption in Spain ¹¹	M-commerce adoption in Ghana ¹²
4	M-payment adoption in US ¹³	M-commerce adoption in China ¹⁵
5	Online shopping adoption in US ¹⁴	M-banking adoption in Ghana ²⁰
6	M-internet adoption in S. Korea ¹⁶	M-commerce adoption in US & China ²¹
7	E-health adoption in Hawaii ¹⁷	M-commerce adoption in Bangladesh ³
8	M-commerce adoption in S. Korea ¹⁸	E-banking adoption in Bangladesh ²⁸
9	Perception in e-commerce in New Zealand ¹⁹	M-internet adoption in China ³⁶
10	M-commerce adoption in <u>US</u> & China ²¹	M-shopping adoption in Taiwan ³⁷
11	M-banking adoption in Australia ²²	Mobile ICT adoption in sub Saharan Africa ⁴²
12	Trust on e-commerce in US ²⁴	E-commerce adoption in S. Africa ⁴³
13	M-banking adoption in Korea ²⁶	M-commerce adoption in Malaysia ⁶¹
14	M-commerce adoption in Hong Kong ³¹	M-commerce adoption in Taiwan ⁶³
15	Trust on internet banking in US ³²	
16	Online Shopping adoption in US ³³	
17	E-shopping adoption in US ³⁴	
18	Trust & risk on M-banking in US ³⁸	
19	M-commerce adoption in US ³⁹	
20	M-ticketing adoption in Finland ⁴⁰	
21	M-services adoption in Norway ⁴⁵	
22	M-commerce adoption in Australia ⁴⁴	
23	Mobile multimedia adoption in Italy ⁴⁶	
24	E-commerce adoption ⁴⁷	
25	M-parking adoption in Norway ⁴⁹	
26	M-internet adoption in US, Europe & Asia ⁴⁸	
27	Mobile ICT adoption in UK ⁵⁴	
28	User satisfaction on e-govt. in Flemish population ⁶⁰	

Table 1: Studies on m-commerce adoption, categorized between developed and developing countries



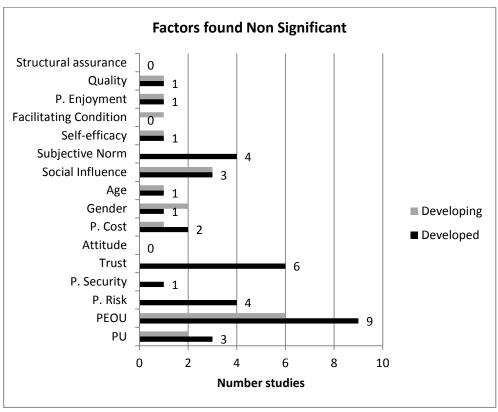


Figure 1: Factors found significant and non-significant – contrast between developed and developing countries

Of the 10 papers studying the influence of perceived risk (PR) in developed countries, 4 of them found PR to have no significant effect in the adoption of mcommerce. The disagreement on this issue is lower in the developing countries where all 3 papers found perceived risk to be highly significant on m-commerce adoption. This means that users in developed countries are less concerned about perceived risk than the users in developing countries. The outcome of perceived privacy is the same both in developed and developing countries with the ratio between significant and not significant being 2:1 respectively. The case of perceived security is somewhat different. Almost all the studies, 3 in developing countries and 2 in developed countries, found perceived security to be highly significant in m-commerce adoption with only exception - who studied m-commerce adoption in Finland but found perceived security to be nonsignificant⁸.

In some cases the factors effecting m-commerce adoption differed significantly, meaning the factors that were found to be highly significant in developing countries were found to be less significant or not significant at all in some developed countries, and vice versa. For example, factors such as 'quality' and 'awareness' were found to be highly significant by the majority of the studies in the developed countries, with 6 out of 7 studies (85%) for 'quality' and 3 out of 3 studies (100%) for 'awareness'. The findings were opposite when investigating these two factors for developing countries where only one paper was found to have dealt with 'quality' with no significant outcome and two papers for 'awareness' that resulted in a high level of disagreement in their findings. This means that awareness of m-commerce is perceived to be needed for the uptake of m-commerce in developed countries but not for developing country uptake, as this was not found to be significant there. In other words, users in developing countries were found to be more aware of m-commerce services than the users in developed countries. However, users in developed countries are more concerned about the product quality than users in developing countries. Subjective norm was found to be more significant in developing countries than in developed countries. This means that consumers in developing countries are more influenced by their peers than are users in developed countries when deciding to use m-commerce services. Education was not found to be a significant factor in the adoption of m-commerce in either developed or developing countries. Mixed results were found for age and gender in developed countries but for developing countries these factors were not found to be significant at all.

4. Limitation

This research faces several limitations. Firstly, it is neither a technical paper of m-commerce nor does it discuss the government policies or regulations; rather the adoption behaviour of this technology is studied across a wide range of users in both developed and developing countries. Secondly, although the keyword search was limited to m-commerce adoption, a number of papers regarding to e-commerce adoption were also brought forward by the search engine 'Google Scholar'. As m-commerce is a subset of e-commerce some of these papers were found very similar to the area under investigation, and were finally selected for the study. Thirdly, only Google Scholar was used for searching the papers due to convenience and credibility but it may not represent all the journals in this field. Although the number of studies were given as forty two, these are represented in 41 papers as one paper²¹, which is equivalent to two papers in this context since it compared the m-commerce adoption between a developed (US) and a developing country (China). Finally, some relevant papers were found to be available in Google Scholar but these were not accessible by the authors since the relevant journals were not subscribed to by their institutions.

5. Implications of the Review

The purpose of this research was to conduct a comprehensive review of literature that studied the determinants affecting m-commerce adoption. The research has contributed to the body of knowledge by identifying a list of factors that affect m-commerce adoption, and compared their impact between developed and developing countries. In total 59 key factors were found to have been studied, most of them in developed countries. Perceived usefulness and perceived ease of use are the two most highly studied factors in this field where perceived usefulness was found to be significant in developing and developed countries by 80% and 85% empirical research respectively; but in case of perceived ease of use it was significant in only 50% and 62% of studies respectively.

Perceived usefulness (PU) and perceived ease of use (PEOU) are the two most dominant constructs of Technology Acceptance Model (TAM). PU is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (he.320); while PEOU is referred as "the degree to which the perspective user expects the target to be free of effort." TAM has been used as a tool for successfully predicting the adoption of different

technologies (e.g. word processors, e-mail, WWW, GSS, Hospital Information Systems) in different situations (e.g., time and culture) with different control factors (e.g., gender, organizational type and size) and different subjects such as undergraduate students, MBAs, and knowledge workers³⁵. TAM has gained substantial empirical support over time, successfully predicting 40% of the variance in usage intention and behaviour⁵⁷. However our review focused particularly on m-commerce adoption found that in 8 out of 10 studies in developing countries PU to be significant in m-commerce adoption; and in case of developed countries this ratio was 17 out of 20. This means that the majority of the studies both in developing and the developed world found that perceived usefulness significantly affects user's intention to use m-commerce services. This result is supported by the prior research of the extended TAM in the context of m-commerce (see Refs. 31, 36, 61, 63) and e-commerce 28,61 . Therefore it can be said that consumers would not use m-commerce services unless they perceive it to be useful for them^{15,61}. Service providers and vendors of m-commerce should focus on how to make mcommerce services really useful for the consumers such as by providing quality, fast and secured services anytime anywhere via the mobile device^{15, 61}.

Contradictory findings have emerged in case of perceived ease of use (PEOU) where only 6 out of the 12 studies found PEOU to be significant in developing countries, and 15 out of 24 in developed countries. Many studies did not find PEOU to affect user's intention to use m-commerce services (see Refs.15, 17, 21, 28, 37, 47, 48, 61, 63). A group of researchers undertook two studies on PEOU and found opposite results; effect of PEOU on user's intention to use mcommerce service were found to have negative effects in their first study and positive effects in the second study¹⁵. It was explained by saying that as the first study was of undergraduates who were knowledgeable and had strong capacity to learn new things, PEOU was not important for them to use m-commerce services but for the second sample it was found to be important as that sample was mixed up with various types of people of the country¹⁵. It was supported by other researchers also who believe that PEOU should not be an influential factor of m-commerce adoption as majority of the mobile users are youths who love exploring and learning new things, thus ease of use does not affect their intention to use m-commerce^{26,61}. PEOU might not have a direct affect on user's intention to use mcommerce services, but found to have some influence on PU for m-commerce adoption (Refs. 26, 31, 37, 47, 48, 49, 63). Therefore service providers should not ignore the effect of ease of use when designing an mcommerce platform as that will indirectly influence user

intention to use m-commerce services such as through PU or attitude.

Research has however; found that it is not sufficient to explain a user's intention to accept technology using just two determinants: perceived ease-of-use and perceived usefulness as proposed by the TAM²⁶. Therefore researchers were keen to extend TAM model with more factors. Some better models were also proposed that can explain adoption of advanced technologies more accurately. Examples of some models are Diffusion on Innovation (DOI)⁵³; the Technology, Organization, and Environment (TOE) Framework⁵⁶; TAM-2⁵⁷; Unified Theory of Acceptance and Use of Technology (UTAUT)⁵⁸ and UTAUT-2⁵⁹. The dominant factors used in UTAUT are performance expectancy (equivalent to PU), effort expectancy (equivalent to PEOU), facilitating condition and social influence⁵⁸. The researchers of UTAUT also showed how the relationship between performance expectancy (or effort expectancy) and intention to use can be moderated by age, gender, and experience^{41,58}. For example, the link between performance expectancy and intention to use is more significant for male and younger workers⁵¹. On the other hand the effect of effort expectancy on intention is more significant for female and older workers, and it starts decreasing with experience⁴¹. The UTAUT model explained 70% of the variance in usage intention, much better than the TAM studies alone (see Refs. 41, 51, 58).

In an m-commerce transaction in particular, consumers' intentions to participate should be seen as a multidimensional behavioural factor⁸ and hence all the models including TAM, TAM-2, UTAUT and UTAUT-2 were extended by many researchers with many factors under different context such as privacy (see Refs. 8, 13, 21), perceived cost (See Refs. 3, 12, 15, 18, 21, 22, 31, 46, 61, 63), perceived security (see Refs. 3, 8, 9, 13, 31), perceived risk (see Refs. 3, 8, 9, 13, 22, 31, 63), trust (see Refs. 26, 36, 38, 54), speed (see Refs. 8, 13, 46), quality (see Refs. 9, 14, 16, 26, 32), convenience (see Refs. 3, 8, 12), compatibility (see Refs. 13, 21, 26, 37, 40, 63) and many more as referred to in Appendix C. A summary of the literature review with its implications has been categorized below. The readers are advised to see the Appendix C for relevant citations or evidences.

5.1. Factors resulted in mixed findings both in developed and developing countries

Researchers found mixed or contradictory results about some factors that affect m-commerce adoption. Examples of these factors are PU, PEOU, perceived privacy, perceived cost, social influence, compatibility, self-efficacy, perceived enjoyment, quality and

customization and trust. Perceived cost, trust and perceived privacy are among the top listed factors, besides PU and PEOU that are already discussed, that resulted in contradictory results. Trust was considered from different perspectives in various studies such as trust on internet, trust in vendors, trust on bank, trust on wireless, trust on e-channel and etc. (see Appendix C). The factor 'trust' was tested empirically by two studies in developing countries and in both cases it was found to be significant. The effect of trust is seen to be more contradictory in developed countries where 6 out of 14 studies, meaning more than 40% studies, did not find trust to have any significant effect on the adoption of m-commerce. It may not be surprising when considered in the context of developed countries where law and order is applied more strictly compared to developing countries; as a result the service providers such as banks, telcos and government usually do not attempt to mislead their clients, thus people may not have experience of distrust and may not be able to evaluate the effect of it properly. Study found that trust in mobile banking adoption is strongly influenced by structural assurances²⁶. Therefore banks should build up fast, secured and advanced platform of mobile banking services to ensure that customers are able to make transactions through mobile network without the fear of risk, fraud and uncertainties. Perceived cost (PC) has drawn some contradictory findings too, accounting the percentage of studies found PC to be significant in developing and developed countries are 84% and 75% respectively. It means that people in developing countries are more price sensitive than those in developed countries which makes sense.

5.2. Factors always found to be significant in developing countries

There are some factors never found to be insignificant in developing countries such as perceived risk, perceived security, trust, experience, subjective norm, complexity and personal innovativeness. But in developed countries these factors resulted in mixed findings. This means that people in the developing countries are more cautious about these issues than people in developed countries.

5.3. Factors always found to be significant in developed countries

Some factors were never found to be insignificant in developed countries but in developing countries; example of these factors are awareness, convenience, facilitating condition, speed and structural assurance. Therefore the vendors and other stake holders of m-commerce in developed countries should consider these factors while providing their m-commerce services.

5.4. Factors always found to be significant both in developed and developing countries

Examples of these factors are attitude, performance expectancy and perceived reliability. Although some researchers did not find any link between attitude and user's intention to use technology⁵⁵, in case of m-commerce attitude was found to be always significant in both developed and developing countries. Performance expectancy has been introduced in UTAUT model⁵⁸ and tested out to be the most influential factor affecting user's intention to adopt technology; but only one research paper³⁸ was found to have studied that factor for m-commerce adoption. More research should be conducted to fill this gap.

5.5. Factors never studied in developing countries

Surprisingly there are a number of factors that were never studied empirically in developing countries for m-commerce adoption; such as reputation, perceived image, satisfaction with past transaction, mobility, frequency, word of mouth, availability, self-control, flexibility, job relevance, result demonstrability, self-expressiveness, perceived playfulness, limited capacity, enhanced communication feature, content reliability, speed, management support, market orientation and structural assurance. All these factors have been studied more or less in developed countries so far. Had these factors been studied in developing countries, research on m-commerce adoption would have been enriched.

5.6. Factors never studied in developed countries

There are some factors that have never been studied in developed countries but were in the developing world. For example, perceived credibility, normative pressure, government peer-influence, e-readiness, expectancy, mobile skilfulness, anxiety, perceived elitisation, rich & fast information, standardisation and accessibility. Surprisingly all these were found to be significant except for perceived credibility in developing countries. The authors believe that all of these factors, that have not been studied vet either in developed or developing countries, if studied could have been found significant in the adoption of mcommerce for that particular region; and would have help the stakeholders to redesign their strategies for mcommerce uptake.

5.7. The effect of moderating factors such as age, gender, education and income

Age, gender, education and income are usually considered as moderating factors that indirectly affect user's intention to use technology. A study found that "the influence of performance expectancy on

behavioural intention is moderated by gender and age, such that the effect is stronger for men and particularly for younger men"^{58(pp.450)}. Unfortunately none of the studies of m-commerce adoption, except for one, that found any of the above mentioned moderating factors to be significant in either developed or developing countries¹¹. It might be interesting to explore why the effect of age, gender, education and income in the adoption of m-commerce is very low or negligible.

6. Conclusion and Future research directions

This paper has presented a review of the literature on m-commerce adoption and contrasts the studies based in developed and developing countries. The purpose was to identify any research gap that could be addressed by researchers in their future work. As mentioned earlier a number of factors were never found to have been studied in developing countries but developed countries and vice versa. For example reputation, perceived image, satisfaction with past transaction, mobility, frequency, word of mouth, availability, selfjob control. flexibility, relevance, result demonstrability, self-expressiveness, perceived playfulness, limited capacity, enhanced communication feature, content reliability, speed, management support, market orientation and structural assurance have never been studied in developing countries, but were found to be significant in many studies of developed countries. Therefore there is a scope of studying these factors in developing countries that will enrich the models of mcommerce adoption. Similarly other factors such as perceived credibility, normative pressure, peerinfluence, government e-readiness, effort expectancy, mobile skilfulness, anxiety, perceived elitisation, rich & fast information, standardisation and accessibility could be used to see the adoption of m-commerce in developed countries since these were not studied in developed countries yet.

The number of longitudinal research studies was found to be much lower than the number of cross sectional research studies in the field m-commerce adoption. Longitudinal research has great demand in any filed as it shows how people's perception on any issue could change overtime, and we need to see that trend in the perception of m-commerce adoption also.

Further, comparative studies of m-commerce adoption between developed and developing countries could have been conducted to see how the user's perceptions on the same factor impact differently in two different situations, and enable the identification of factors that are effective in developing countries but are perhaps not as effective as in the developed world.

It would be interesting to study the link between personal awareness of m-commerce and media advertising to make clear to stakeholders the effectiveness of their advertising. Government regulation, not studied precisely here, could be investigated to understand how it affects a country's adoption of m-commerce. It would be worthwhile to see how a company's performance, growth, reputation, solvency and profitability can impact the adoption of m-commerce.

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Appendix A: Definitions of some key factors effecting m-commerce adoption

Factor	Definition
Perceived Usefulness	Perceived usefulness (PU) is defined as "the degree to which a person believes that
(PU)	using a particular system would enhance his or her job performance" ⁶ (pp.320).
Perceived ease of use (PEOU)	Perceived ease of use (PEOU) referred as "the degree to which the perspective user expects the target to be free of effort" ⁶ (pp.320).
Attitude (Att.)	An individual's positive or negative feelings about performing the target behaviour 55,58,64
Perceived Risk (PR)	Perceived risk is defined as the user's subjective expectation of suffering a loss in pursuit of the desired outcome of using MC ^{63(pp.723)} .
Trust (T)	Trust can be described as the belief that the other party will behave in a socially responsible manner, and, by so doing, will fulfill the trusting party's expectations without taking advantage of its vulnerabilities ⁴⁷ .
Subjective Norm (SN)	Subjective norm is defined as a "person's perception that most people who are important to him think he should or should not perform the behaviour in question" (23(pp.302)).
Cost	"The possible expenses of using m-commerce, i.e., equipments costs, access cost, and transaction fees;" 63(pp.723).
Behavioural control	"The perceived ease or difficulty of performing the behaviour" 65 (pp.188).
Compatibility	"The degree to which an innovation is perceived as being consistent with the existing values, needs, and past experiences of potential adopters" 66(pp.195).
Self-efficacy	"Judgment of one's ability to use a technology (e.g., computer) to accomplish a particular job or task" 58(pp.432).
Facilitating condition	Objective factors in the environment that observers agree make an act easy to accomplish. For example, returning items purchased online is facilitated when no fee is charged to return the item. In an IS context, "provision of support for users of PCs may be one type of facilitating condition that can influence system utilization" ^{67(pp.126)} .

<u>Appendix B</u>: Factors affecting m-commerce adoption – comparatively studied between developed and developing countries

Factors	Number of studies			
	Develo	Developed countries		ing countries
	Significant	Not Significant	Significant	Not Significant
Perceived Usefulness (PU)	17	3	8	2
Perceived ease of use (PEOU)	15	9	6	6
Perceived Risk (PR)	6	4	3	0
Perceived Privacy (PP)	2	1	2	1
Perceived Security (PS)	2	1	3	0
Trust (T)	8	6	2	0
Reputation	2	1	0	0
Perceived Credibility	0	0	1	1
Perceived Image	1	1	0	0
Experience	5	2	1	0
Satisfaction with past transaction	1	0	0	0
Mobility	1	0	0	0
Attitude (Att.)	7	0	2	0
Awareness/ Knowledge	3	0	1	1
Perceived Cost	6	2	5	1

Factors	Number of studies			
	Developed countries		Developing countries	
	Significant	Not Significant	Significant	Not Significant
Gender	0	1	0	2
Age	1	1	0	1
Education	0	1	0	2
Income	0	1	0	1
Frequency	1	2	0	0
Word of mouth	1	0	0	0
Availability	0	1	0	0
Social/cultural Influence	3	3	4	3
Subjective Norm (SN)	2	4	1	0
Normative pressure	0	0	1	0
Self/Behavioural Control	4	1	0	0
Peer Influence	0	0	1	0
Compatibility/ Familiarity	4	1	2	1
Complexity	1	1	2	0
Flexibility	1	0	0	0
Convenience	2	0	1	1
Govt. e-readiness	0	0	1	0
Mobile Skilfulness	0	0	1	0
Self-efficacy	5 4	1	1	1
Facilitating Condition		0	2	1
Effort Expectancy Performance Expectancy	0	0	1	0
Job Relevance	1	0	0	0 0
Result Demonstrability	0	1	0	0
Self-Expressiveness	2	1	0	0
Perceived Enjoyment	3	1	1	1
Perceived Playfulness	1	0	0	0
Personal Innovativeness	1	2	1	0
Anxiety	0	0	1	0
Limited capacity	1	0	0	0
Enhanced communication feature	1	0	0	0
Perceived Elitisation	0	0	1	0
Quality	6	1	0	1
Perceived Reliability	1	0	1	0
Perceived value added	1	1	0	1
Content Reliability	1	0	0	0
Speed or Slow connection	3	0	0	0
Rich & Fast information	0	0	1	0
Customization or Customer service	2	1	0	1
Management support	0	1	0	0
Standardisation	0	0	1	0
Market orientation	1	1	0	0
Structural Assurance	3	0	0	0
Accessibility	0	0	1	0

Appendix C: Factors affecting m-commerce adoption: Comparatively studied between developed and developing countries

The table below shows the relationship: Factor \rightarrow Intention to use (I), if not specified otherwise

Factors	Context	Found Highly Significant in	Not Significant, found in
Perceived	Developing	M-commerce adoption in China ¹⁵	M-commerce adoption in Bangladesh ³
Usefulness	countries	(M-banking adoption in Ghana: $PU \rightarrow Att. \& I$) ²⁰	(Mobile ICT adoption in sub Saharan Africa:
(PU)		(M-commerce adoption in US & China) ²¹	$PU \rightarrow Business \& socializing use of mobile ICT)^{42}$
		M-internet adoption in China ³⁶	
		M-shopping adoption in Taiwan ³⁷	
		(e-banking adoption in Bangladesh: $PU \rightarrow Att. \& I$) ²⁸	
		M-commerce adoption-Malaysia ⁶¹	
		M-commerce adoption in Taiwan ⁶³	
	Developed	M-payment adoption in US ¹³	M-ticketing adoption in Finland ⁴⁰
	Countries	(M-internet adoption in S. Korea: $PU \rightarrow Att. \& I$) ¹⁶	(M-services adoption in Norway : PU → Intention
		e-health adoption in Hawaii ¹⁷	to use more goal directed mobile services (i.e. SMS
		(M-commerce adoption in <u>US</u> & China) ²¹	& payment) than the intention to use experimental
		(M-banking adoption in Australia) ²²	mobile services (i.e. contact & gaming) ⁴⁵
		(M-banking adoption in Korea) ²⁶	M-internet adoption in US, Europe & Asia ⁴⁸
		(M-internet adoption in US, Europe &	W-internet adoption in 03, Europe & Asia
		M-commerce adoption in Hong Kong ³¹	4
		Trust on internet banking in US ³²	-
		Online Shopping adoption in US ³³	4
		11 0 1	_
		(e-shopping adoption in US:	
		M-services adoption in Norway ⁴⁵	<u> </u>
		M-commerce adoption in Australia: PU →Att. 44	
		Mobile multimedia adoption in Italy ⁴⁶	
		e-commerce adoption ⁴⁷	
		(M-parking adoption in Norway: PU \rightarrow Att. & I) ⁴⁹	
		Mobile ICT adoption in UK ⁵⁴	15
Perceived	Developing	(M-banking adoption- Ghana: $PEOU \rightarrow Att.$) ²⁰	M-commerce in China ¹⁵
ease of use	countries	(M-commerce adoption in US & <u>China</u>) ²¹	(e-banking adoption in Bangladesh: $PEOU \rightarrow I$.) ²⁸
(PEOU)		(e-banking adoption in Bangladesh: $PEOU \rightarrow Att.$) ²⁸	(M-shopping adoption in Taiwan: $PEOU \rightarrow I$) ³⁷
		(Mobile shopping adoption in Taiwan:	(mobile ICT adoption in sub Saharan Africa:
		M-internet adoption in China ³⁶	M-commerce adoption in Malaysia ⁶¹
		(M-commerce in adoption Taiwan PEOU \rightarrow PU) ⁶³	(M-commerce adoption in Taiwan: $PEOU \rightarrow I$) ⁶³
	Developed	(online shopping adoption in US:	e-health adoption in Hawaii ¹⁷
	Countries	M-payment adoption in US ¹³	(M-commerce in <u>US</u> & China) ²¹
		(M-commerce in Hong Kong: PEOU →PU) ³¹	(M-banking adoption in Australia: PEOU→ Att.) ²²
		(M-banking adoption in Korea: PEOU → PU & I) ²⁶	(M-banking adoption in Korea: PEOU →Trust) ²⁶
		Trust on internet banking in US ³²	(M-commerce in Hong Kong: PEOU →PU) ³¹
		(M-internet adoption in Korea:	(e-shopping adoption in US:
		Online Shopping adoption in US ³³	E-commerce adoption ⁴⁷
		M-ticketing adoption in Finland ⁴⁰	M-internet adoption in US, Europe & Asia ⁴⁸
		M-services adoption in Norway ⁴⁵	(M-internet adoption in Norway: PEOU → Att.) 49
		(M-commerce adoption in Australia: PU →Att.) 44	
		Mobile multimedia adoption in Italy ⁴⁶	-
		(E-commerce adoption: PEOU→ PU & I) ⁴⁷	
		(M-parking adoption in Norway: PEOU \rightarrow PU) ⁴⁹	
		(M-internet adoption in US, Europe & Asia:	
		Mobile ICT adoption in UK ⁵⁴	
		Moone ICT adoption in UK	

Factors	Context	Found Highly Significant in	Not Significant, found in
Trust (T)	Developing	(M-internet adoption in China:	
	countries	Trust in m-internet $\rightarrow I$) ³⁶	
		M-commerce adoption in Malaysia ⁶¹	
	Developed	(E-govt. adoption in US:	(E-govt. adoption in US:
	Countries	Trust on internet \rightarrow I, Trust on Gov. \rightarrow I) ¹⁰	Trust on Internet \rightarrow Lower Risk) ¹⁰
		(E-govt. adoption in US: Trust on Govt. → Lower Risk) ¹⁰	(Perception in e-commerce in New Zealand: Trust → PR) ¹⁹
		(e-commerce adoption in New Zealand:	(Trust on e-commerce in US:
		Trust worthiness → Trust) ¹⁹	Trust in vendor ability \rightarrow I) ²⁴
		(Trust on e-commerce in US:	(Trust on internet banking in US:
		Trust in vendor integrity & predictability \rightarrow I) ²⁴	Trust on bank \rightarrow I) 32
		Trust in vendor integrity & predictability \rightarrow I) ²⁴ (M-banking adoption in Korea: Trust \rightarrow I & PU) ²⁶	(Trust & risk on M-banking in US: Trust on bank \rightarrow I & PR) ³⁸
		(Trust on internet banking in	(Trust & risk on M-banking in US: Trust →
		US: Trust on e-channel \rightarrow I) ³²	performance expectancy) ³⁸
		(E-commerce adoption:	
		Trust → I, PR, PU & PEOU) ⁴⁷ (Mobile ICT adoption in UK:	_
		Wireless Trust \rightarrow PU) ⁵⁴	
Perceived	Developing	M-banking adoption in India ⁹	
risk (PR)	countries	M-commerce adoption in Bangladesh ³	_
, ,		M-commerce adoption in Taiwan ⁶³	
	Developed	M-payment adoption in US ¹³	M-commerce adoption in Finland ⁸
	Countries	(M-banking adoption in Australia: $PR \rightarrow Att.$) ²²	Wi-commerce adoption in Finnand
	Countries		e-govt. adoption –US ¹⁰
		(M-commerce adoption in Hong Kong: PR → PU) 31	
		(Trust & risk on M-banking in US: PR → I & Performance expectancy) ³⁸	(online shopping adoption in US: PR → Customer value) ¹⁴
		(M-commerce adoption in Australia: $PR \rightarrow Att.$) ⁴⁴	(Perception in e-commerce in New Zealand:
		E-commerce adoption in Australia. The Anal.)	$\begin{array}{c} \text{PR} \rightarrow \text{Trust})^{19} \end{array}$
Perceived	Developing	M-banking adoption in India ⁹	(M-commerce adoption in US & China) 21
privacy	countries	(e-banking adoption in Bangladesh: $PP \rightarrow I \& Att.$) ²⁸	(c
(PP)	Developed	(M-payment adoption in US: $PP \rightarrow PR$) ¹³	M-commerce adoption in Finland ⁸
	Countries	(M-commerce adoption in <u>US</u> & China) ²¹	- In commerce adoption in I intaile
D 4 . 4	D 1 :	(W commerce adoption in <u>ob</u> & china)	
Reputation (RP)	Developing Countries		
(141)	Developed	(Online shopping adoption in US:	(Online shopping adoption in US: $RP \rightarrow PR$) ¹⁴
	Countries	$RP \rightarrow Product quality)^{14}$	(**************************************
		(E-commerce adoption: RP → Trust) 47	
Perceived	Developing	(M-banking adoption in Ghana:	(M-commerce adoption in China:
credibility	countries	$PCr \rightarrow I \& Att.$) ²⁰	$PCr \rightarrow I \& PU)^{15}$
(PCr)	Developed		
Perceived	Countries Developing		
image	countries		
	Developed	(M-commerce adoption in Australia: $PI \rightarrow Att.$) ⁴⁴	(e-health adoption in Hawaii: $PI \rightarrow PU$) ¹⁷
(PI)	Countries	1	1
Satisfaction	Developing		
with past	countries	(n)	
transaction	Developed	(E-commerce adoption: SPT \rightarrow Trust) ⁴⁷	
(SPT) Mobility	Countries Developing		
(Mb)	Countries Countries		
(1110)	Developed	(M-ticketing adoption in Finland:	
	Countries	$Mb \rightarrow I$, mediated by use context) ⁴⁰	
		. , , , , , , , , , , , , , , , , , , ,	

Factors	Context	Found Highly Significant in	Not Significant, found in
Experience	Developing	(E-govt. adoption in Kuwait:	
(Exp)	countries	Internet Exp. Moderates ${}^{1}PE \rightarrow I \& {}^{2}EE \rightarrow I)^{27}$ (M-commerce adoption in Spain:	(M. commons adoption in Casin
	Developed Countries	length of mobile use \rightarrow I) ¹¹	(M-commerce adoption in Spain: Internet Shopping Exp. → I & Att.) ¹¹
	Countries	(M-commerce in Spain:	(Perception in e-commerce in New Zealand:
		M-commerce Exp. \rightarrow Attitude) ¹¹	Web Exp. \rightarrow PR) ¹⁹
		(M-internet adoption in S. Korea:	
		Internet Exp. → PEOU & Playfulness) ¹⁶	
		(Online shopping adoption in US: Exp → Customer value & Product quality) ¹⁴	
		(Perception in e-commerce in New Zealand:	
		Web Exp. \rightarrow Trust) ¹⁹	
Attitude	Developing	(M-banking adoption in Ghana) ²⁰	
(Att.)	countries	(e-banking adoption in Bangladesh) ²⁸	
	Developed	M-commerce adoption in Spain ¹¹	
	Countries	M-internet adoption in Korea ¹⁶	
		(IT adoption in US: Att. \rightarrow Actual usage) ⁷	
		(M-banking adoption in Australia) ²²	
		M-commerce adoption in Australia ⁴⁴	1
		M-parking adoption in Norway ⁴⁹	
		M-internet adoption in US, Europe & Asia ⁴⁸	
Perceived	Developing	M-banking adoption in India ⁹	
security	countries	M-commerce adoption in Bangladesh ³	1
(PS)		(E-banking adoption in Bangladesh: $PS \rightarrow I \& Att.$) ²⁸	1
	Developed	$(M$ -payment adoption in US: $PS \rightarrow PR$) ¹³	M-commerce adoption in Finland ⁸
	Countries	(M-commerce adoption in Hong Kong: PS →PU) ³¹	1
Awareness (Aw)	Developing countries	(E-commerce adoption in S. Africa: $Aw \rightarrow I$) ⁴³	(M-commerce adoption in Bangladesh: $Aw \rightarrow I$) ³
/ Knowledge	Developed Countries	(M-commerce adoption in US: Consumer's unawareness was found significant) ³⁹	
(K)	Countries	(Mobile multimedia adoption in Italy:	-
		$K \rightarrow Interest)^{46}$	
		(User satisfaction on E-govt. in Flemish population : Awareness required in finding the service) ⁶⁰	
Perceived	Developing	M-commerce adoption in Ghana ¹²	M-commerce adoption in China ¹⁵
cost	countries	(M-commerce adoption in US & <u>China</u>) ²¹	
(PC)		M-commerce adoption in Bangladesh ³	
		M-commerce adoption in Malaysia ⁶¹	
		M-commerce adoption in Taiwan ⁶³	
	Developed	M-commerce adoption in Finland ⁸	(M-commerce adoption in <u>US</u> & China) ²¹
	Countries	(M-internet adoption in S. Korea:	M-commerce adoption in S. Korea ¹⁸
		Price \rightarrow Att. & I) ¹⁶	
		(Online shopping adoption in US: Price → PR) ¹⁴	
		(M-banking adoption in Australia: PC →Att. & I) ²²	
		(M-commerce adoption in Hong Kong:	
		$PC \rightarrow PU)^{31}$	
		Mobile multimedia adoption in Italy ⁴⁶	
Availability	Developing		
	countries Developed		M-commerce adoption in S. Korea:
	Countries		Availability \rightarrow User satisfaction) ¹⁸
			(Table continued to the next page)

Factors	Context	Found Highly Significant in	Not Significant, found in
Gender	Developin		(E-govt. adoption in Kuwait) ²⁷
	g countries		Mobile ICT adoption in Sub Saharan Africa ⁴²
	Developed		M-commerce adoption in Spain [™]
	Countries		10 10 100 1 10 10 10 10 10 10 10 10 10 1
Age	Developin		Mobile ICT adoption in Sub Saharan Africa ⁴²
	g countries Developed	(M-commerce adoption in Spain:	Mobile multimedia adoption in Italy ⁴⁶
	Countries	Age → Frequency of mobile use,	Wiobite martificata adoption in reary
		Age \rightarrow length of mobile use, Age \rightarrow I &	
		Age \rightarrow Frequency of m-commerce use) ¹¹	20
Education	Developin		M-banking adoption in Ghana ²⁰
	g countries		Mobile ICT adoption in Sub Saharan Africa ⁴²
	Developed		M-commerce adoption in Spain ¹¹
Incomo	Countries		M-banking adoption in Ghana ²⁰
Income	Developin g countries		м-ванкінд аавривн ін Спапа
	Developed		M-commerce adoption in Spain ¹¹
	Countries		T. C.
Frequency	Developin		
	g countries		
	Developed	(M-commerce adoption in Spain: Frequency of	(M-commerce adoption in Spain: Frequency of mobile use \rightarrow I) ¹¹
	Countries	mobile use \rightarrow Frequency of m-commerce) ¹¹	
			(E-commerce adoption : Frequency → Trust) ⁴⁷
Word of	Developin		
mouth	g countries		
	Developed	(Trust on internet banking in US:	
	Countries	Word of mouth \rightarrow trust on e-channel) 32	
Social	Developin	(M-commerce adoption in China: $SI \rightarrow I$) ¹⁵	(M-banking adoption in Ghana: $SI \rightarrow I$) ²⁰
Influence (SI)	g countries	(M-commerce adoption in US & China: $SI \rightarrow I$) ²¹	(M-internet adoption in China: $SI \rightarrow I$) ³⁶
		(Mobile ICT adoption in sub –Saharan Africa:	(Mobile ICT adoption in sub –Saharan Africa: $CI \rightarrow I$) ⁴²
Or/and		$CI \rightarrow PEOU)^{42}$	Africa: CI →I) *²
		(M-commerce adoption in Malaysia:	
Cultural		$SI \rightarrow I)^{61}$	
Cultural Influence	Developed	(Trust on e-commerce in US:	(M-commerce adoption in Finland: Social
(CI)	Countries	Higher social presence → Trust in venders	Status not Significant) ⁸
		integrity & predictability) ²⁴	
		(M-banking adoption in Korea (SI \rightarrow PU) ²⁶	(M-commerce adoption in <u>US</u> & China: $SI \rightarrow I$) ²¹
		(Mobile ICT adoption in UK: SI \rightarrow PU) ⁵⁴	(Trust on e-commerce in US:
		,	Higher social presence → Trust in
0.11	D	0.00	venders ability) ²⁴
Subjective	Developin	(M-commerce adoption in US & <u>China</u>) ²¹	
Norm (SN)	g countries	Of comment of the Property of	(C health adoption in Health CNL DH 0 D17
(511)	Developed Countries	(M-commerce adoption in Hong Kong: SN→ PU) ³¹	(E-health adoption in Hawaii: SN→ PU & I) ¹⁷
	Countries	(M-commerce adoption in Australia:	(M-commerce adoption in <u>US</u> & China) ²¹
		$(N \rightarrow I)^{44}$	(M-commerce adoption in Hong Kong:
			(M-confinerce adoption in Frong Rong.) $SN \rightarrow I)^{31}$
			(M-internet adoption in US, Europe & Asia:
		the state of the s	I UVI-INTERNET AGODITOR ID U.S. ETITORE & ASIA

Factors	Context	Found Highly Significant in	Not Significant, found in
Normative	Developing		
Pressure	countries	45	
(NP)	Developed Countries	M-services adoption in Norway ⁴⁵	
Self-Control (SC)	Developing countries		
&	Developed Countries	(M-services adoption in Norway: BC →I) 45	(E-shopping adoption in US: Perceived Control→ Intention to return) ³⁴
Behavioural		(M-commerce adoption in Australia: BC →I) ⁴⁴	
Control (BC)		(M-internet adoption in US, Europe & Asia: BC \rightarrow I) ⁴⁸	
		(M-internet adoption in US, Europe & Asia: SC → Subjective Norm) ⁴⁸	
Peer Influence	Developing countries Developed	(E-govt. adoption in Kuwait) ²⁷	
	countries		
Flexibility	Developing		
	<i>countries</i> Developed	(M-commerce adoption in Finland:	
	Countries	Flexibility was found significant) ⁸	
Compatibility	Developing countries	(M-shopping adoption in Taiwan: Compatibility \rightarrow I) ³⁷	(M-commerce adoption in US & China: Compatibility \rightarrow I) ²¹
Or		Compatibility \rightarrow I) ³⁷ (M-commerce adoption in Taiwan: Compatibility \rightarrow I & PU) ⁶³ (M-payment adoption in US: Compatibility \rightarrow I) ¹³	
Familiarity	Developed Countries	(M-payment adoption in US: Compatibility \rightarrow I) ¹³	(M-banking adoption in Korea: Familiarity with bank → PEOU) ²⁶
		(M-commerce adoption in <u>US</u> & China: Compatibility \rightarrow I) ²¹	
		(M-banking adoption in Australia: Compatibility → I & Att.) ²²	
		(M-ticketing adoption in Finland: Compatibility → I) ⁴⁰ (M-banking adoption in India:	
Complexity	Developing countries	(M-banking adoption in India: Operability of mobile handset) ⁹ (M-internet adoption in China:	
		(M-internet adoption in China: System complexity \rightarrow I) ³⁶ Mobile ICT adoption in UK ⁵⁴	
	Developed Countries		M-commerce adoption in Finland ⁸
Convenience	Developing countries	M-commerce adoption in Ghana ¹²	(M-commerce adoption in Bangladesh: convenience \rightarrow I) ³
	Developed Countries	(M-commerce adoption in Finland: Flexibility was found significant) ⁸	
		(M-payment adoption in US: convenience → PU) ¹³	
Govt. e-readiness	Developing countries	(E-commerce adoption in S. Africa: Govt. e-readiness → I) ⁴³	
	Developed Countries		
Mobile	Developin	(M-shopping adoption in Taiwan:	
Skilfulness	g countries Developed	mobile skilfulness $\rightarrow PU$, Anxiety, Enjoyment) ³⁷	
Self-	Countries Developing		
Expressiveness	countries		
	Developed countries	(M-services adoption in Norway : Self-expressiveness → I) ⁴⁵	(M-parking adoption in Norway: Self-expressiveness →Att.) ⁴⁹
		(M-parking adoption in Norway: Self-expressiveness → PU & I) ⁴⁹	

Factors	Context	Found Highly Significant in	Not Significant, found in
Facilitating	Developing	(E-govt. adoption in Kuwait:	M-internet adoption in China ³⁶
Condition	countries	$FC \rightarrow use \ Behaviour)^{27}$	
(FC)		(M-banking adoption in Ghana: $FC \rightarrow Att. \& I)^{20}$	
	Developed	(M-banking adoption in Korea:	
	Countries	$FC \rightarrow PEOU)^{26}$	
		(M-commerce adoption in Australia: FC → Behavioural control) 44	
		(M-internet adoption in US, Europe & Asia: FC → Behavioural control) 48	
		(Mobile ICT adoption in UK: FC → PU & PEOU) ⁵⁴	
Effort Expectancy	Developing	(E-govt. adoption in Kuwait: $EE \rightarrow I$) ²⁷	
(EE)	Developed		
D. C	Countries	(F	
Performance Expectancy	Developing countries	(E-govt. adoption in Kuwait: $PE \rightarrow I$) ²⁷	
(PE)	Developed Countries	(Trust & risk on M-banking in US: PE \rightarrow I) ³⁸	
Job Relevance	Developing countries		
(JR)	Developed Countries	(E-health adoption in Hawaii: JR →PU) ¹⁷	
Self-Efficacy	Developing	(M-commerce adoption in Bangladesh:	(M-commerce adoption in Bangladesh:
(SE)	countries	SE moderates rich & fast info $\rightarrow I$) ³	SE moderates awareness $\rightarrow I$, convenience $\rightarrow I$, risk $\rightarrow I \& PU \rightarrow I$) ³
,	Developed	(M-banking adoption in Korea: SE \rightarrow PEOU) ²⁶	(Trust & risk on M-banking in US: SE →
	countries	(M-commerce adoption in Hong Kong: SE → PEOU & I) ³¹	PR) ³⁸
		(Trust & risk on M-banking in US: SE → Structural assurance) ³⁸	
		(M-commerce adoption in Australia: SE → Behavioural control) ⁴⁴	
		(M-internet adoption in US, Europe & Asia: SE → Behavioural control) ⁴⁸	
Result Demonstrability	Developing countries	SE > Behavioural control)	
(RD)	Developed		(E-health adoption in Hawaii: RD →PU) ¹⁷
	Countries		
Perceived Enjoyment	Developing countries	M-shopping adoption in Taiwan ³⁷	(M-commerce adoption in US & <u>China</u>) ²¹
3-3	Developed Countries	(M-commerce adoption in <u>US</u> & China) ²¹	(M-commerce adoption in Finland: Entertaining feature → not Significant) ⁸
		(E-shopping adoption in US:	
		Shopping enjoyment → Intention to return) ³⁴ M-services adoption in Norway ⁴⁵	
D	D 1 .	M-services adoption in Norway ⁴³	
Perceived playfulness	Developing countries		
	Developed Countries	(M-internet adoption in S. Korea: Perceived playfulness →Att. & I) ¹⁶	
Standardization	Developing	M-banking adoption in India ⁹	
	Developed		
	Countries		

Factors	Context	Found Highly Significant in	Not Significant, found in
Personal	Developing	(M-commerce adoption in US & China) 21	
Innovativeness	countries		
	Developed Countries	(M-commerce adoption in <u>US</u> & China) ²¹	(M-commerce adoption in Australia: Personal innovativeness → Att.) ⁴⁴
			(Mobile multimedia adoption in Italy:
			Personal innovativeness – not significant) 46
Anxiety	Developing countries	M-shopping adoption in Taiwan ³⁷	
	Developed		
	Countries		
Enhanced	Developing		
communication	countries	48	
feature	Developed Countries	M-commerce adoption in Finland ⁸	
Perceived	Developing	M-banking adoption in Ghana ²⁰	
Elitisation	countries		
	Developed		
	Countries		
Accessibility	Developing countries	(Mobile ICT adoption in sub Saharan Africa: Accessibility → PU & PEOU) ⁴²	
	Developed	necessionly +1 o d 1 Eoo)	
	Countries		
Quality	Developing		(M-banking adoption in India: Telecom
	countries		service quality – not found significant) ⁹
	Developed	(M-internet adoption in S. Korea:	Trust on internet banking in US ³²
	countries	Content quality → PU & Playfulness) ¹⁶ (M-internet adoption in S. Korea:	
		System quality \rightarrow PU & PEOU) ¹⁶	
		(Online shopping adoption in US:	
		Product quality → Customer value & Risk) ¹⁴	
		(E-health adoption in Hawaii:	
		Output quality $\rightarrow PU$) ¹⁷	
		(Perception in e-commerce in New Zealand: Website quality → Trust) ¹⁹	
		(M-banking adoption in Korea: System quality → PU) ²⁶	
Perceived	Developing	Mobile ICT adoption in sub Saharan Africa ⁴²	
Reliability	countries		
	Developed Countries	M-services adoption in Norway ⁴⁵	
Perceived value	Developing		(M-commerce adoption in US & China) 21
added	Countries	(E-shopping adoption in US:	(M-commerce adoption in <u>US</u> & China) ²¹
	Developed Countries	Perceived value added \rightarrow shopping enjoyment) ³⁴	(ivi-confinerce adoption in <u>US</u> & China)
Content	Developing	shopping enjoyment)	
Reliability	countries		
-	Developed	(M-commerce adoption in S. Korea:	
	Countries	Content reliability → User satisfaction) ¹⁸	
Speed	Developing		
Specu	countries		
&/or	Developed	(M-commerce adoption in Finland:	
	Countries	Slow connection \rightarrow I) ⁸	
Slow connection		(M-payment adoption in US: Speed \rightarrow PU) ¹³	
		(Mobile multimedia adoption in Italy:	
		Speed of use \rightarrow I) ⁴⁶	

Factors	Context	Found Highly Significant in	Not Significant, found in
Rich & Fast	Developin	M-commerce adoption in Bangladesh ³	
information	g countries		
	Developed		
	Countries		
Customization	Developin		M-banking adoption in India ⁹
	g countries		
&/or	Developed	(Online shopping adoption in US:	(M-commerce adoption in S. Korea:
	countries	Customer service \rightarrow Experience) ¹⁴	Customer service \rightarrow User satisfaction) ¹⁸
Customer		(M-commerce adoption in US:	
service		Customization was found significant) 39	
Management	Developin		
support	g countries		
	Developed		Trust on internet banking in US ³²
	Countries		
Market	Developin		
Orientation	g countries		
	Developed	(Perception in e-commerce in New Zealand:	(Perception in e-commerce in New Zealand:
	Countries	Market Orientation → Trust) ¹⁹	Market Orientation → e-commerce
			participation) ¹⁹
Structural	Developin		
Assurance	g countries		
	Developed	(M-banking adoption in Korea:	
	Countries	Structural assurance \rightarrow Trust) ²⁶	
		(Trust on internet banking In US:	
		Structural assurance \rightarrow Trust) ³²	
		(Trust & risk on M-banking in US:	
		Structural assurance → Perceived Risk) ³⁸	
Limited	Developin		
capacity	g countries		
	Developed	M-commerce adoption in Finland ⁸	
	Countries		