

## **Dedication**

This dissertation is dedicated to my beloved father

**Eng. George Wadie Karma**

Who has been a source of encouragement and inspiration to me throughout my life. Since the very beginning he taught me how to realize the importance of education.

Dad; you have actively supported me in my determination to find and realize my potential, and to make this contribution to our world.

Also I dedicate my efforts to my mother, **Georgette Nakhla** who represented to me 'living proof' of women's ability to redefine and recreate our lives,

To my dear husband, **George Victor** and my beloved kids **Kirollos** and **Madonna** who remains willing to engage with the struggle, and ensuing discomfort, of having a partner/mum who refuses to accept the given role of the woman and is actively engaged in redefining and redesigning that role.

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## **Table of contents**

Dedication .....	i
Acknowledgment.....	ii
Table of contents.....	iii
List of tables.....	viii
List of figures.....	xii
Abstract.....	xiii

### **Chapter ONE**

1.1 Introduction.....	2
1.2 Background of the study.....	2
1.3 Problem statement of the study.....	7
1.4 Research objection.....	15
1.5 Research questions.....	16
1.6 Significance of the study.....	17
1.7 Scope of the study.....	18
1.8 Overview of the theoretical framework.....	18
1.9 Definition of key terms.....	19
1.10 Structure of the study.....	21

### **Chapter TWO**

2.1 Introduction.....	23
2.2 Self Service Technology (SST).....	23
2.3 Banking industry in Sudan.....	25
2.3.1 Swift network service.....	27
2.3.2 National switch center.....	27
2.3.3 Electronic cheques clearance service.....	29
2.3.4 Card personalization service.....	29
2.3.5 Banking information network.....	29
2.3.6 Value added services.....	30
2.3.7 Electronic banking.....	30

2.4	Mobile Banking.....	37
	2.4.1 Definition, Benefits and History of Mobile Banking.....	37
	2.4.2 Challenges and barriers of using M. Banking.....	40
2.4.3	M-Banking in Asia / Australia.....	42
2.4.4	M-Banking in Europe and America.....	49
2.4.5	M- Banking in Africa.....	51
2.5	Technology acceptance Model.....	57
2.6	Theory of reasoned action.....	63
2.7	Service quality theory.....	66
2.8	Model justification.....	71
	2.8.1 Integrating TAM, TRA and SERVQUAL.....	72
	2.8.2 Moderation effect.....	72
2.9	Conceptual model and hypothesis development.....	72
	2.9.1 Overview .....	72
	2.9.2 Perceived usefulness and adoption.....	73
	2.9.3 Perceived ease of use and adoption.....	77
	2.9.4 Perceived trust and adoption.....	80
	2.9.5 Perceived risk and adoption.....	82
	2.9.6 Subjective norms and adoption.....	85
	2.9.7 Subjective quality and adoption.....	88

### **Chapter Three**

3.1	Introduction .....	94
3.2	Research design.....	94
3.3	Research population.....	96
3.4	Sampling procedure.....	96
3.5	Sample Size.....	97
3.6	Research instrument.....	98
3.7	Research measurements and operational definitions.....	98
	3.7.1 Perceived usefulness measurements.....	100
	3.7.2 Perceived ease of use measurements.....	101

3.7.3	M banking adoption measurements.....	101
3.7.4	Perceived risk measurement.....	102
3.7.5	Perceived trust measurement.....	102
3.7.6	Subjective Norms measurement.....	103
3.7.7	Measurement of reliability of service quality.....	104
3.7.8	Measurement of Responsiveness of service quality.....	105
3.7.9	Measurement of Efficiency of service quality.....	105
3.7.10	Measurement of convenience of service quality.....	106
3.7.11	Situational factors measurements.....	107
3.8	Data gathering procedure.....	109
3.9	Data analysis techniques.....	109
3.10	Validity and Reliability.....	110
3.11	Ethical consideration.....	111

#### **Chapter Four**

4.1	Introduction.....	112
4.2	Data Entry and cleaning.....	112
4.3	Profile of respondents.....	112
4.4	Mobile Banking usage.....	114
4.5	Validity of all construction in the model.....	119
4.5.1	Factor analysis for TAM.....	119
4.5.2	Factor analysis for Service Quality.....	120
4.5.3	Factor analysis for Subjective Norms .....	124
4.5.4	Factor analysis for Situation Factors.....	127
4.5.5	Factor analysis for m-banking Adoption.....	129
4.6	Reliability analysis.....	133
4.7	Zero-Order Correlations among All Variables.....	134
4.8	Normality Test.....	138
4.9	Hypotheses Testing.....	139
4.9.1	TAM Dimensions with M-Banking adoption.....	140
4.9.2	Subjective norms Dimensions with M-Banking adoption.....	144

4.9.3	Service Quality Dimensions with M-Banking adoption.....	145
4.9.4	Moderation Test.....	147
4.9.4.1	PU–BI- Moderating effect of waiting time.....	147
4.9.4.2	PEU–BI- Moderating effect of waiting time.....	148
4.9.4.3	PT–BI- Moderating effect of waiting time.....	150
4.9.4.4	PT–BI- Moderating effect of waiting time.....	151
4.9.4.5	DN–BI- Moderating effect of waiting time.....	153
4.9.4.6	IN–BI- Moderating effect of waiting time.....	154
4.9.4.7	REL–BI- Moderating effect of waiting time.....	156
4.9.4.8	EFF–BI- Moderating effect of waiting time.....	157
4.9.4.9	CONV–BI- Moderating effect of waiting time.....	158
4.9.4.10	PU – BI moderation of Task Interruption.....	160
4.9.4.11	PEU – BI moderation of Task Interruption.....	162
4.9.4.12	PT – BI moderation of Task Interruption.....	163
4.9.4.13	PR – BI moderation of Task Interruption.....	164
4.9.4.14	DN – BI moderation of Task Interruption.....	165
4.9.4.15	IN– BI moderation of Task Interruption .....	166
4.9.4.16	REL – BI moderation of Task Interruption.....	167
4.9.4.17	EFF – BI moderation of Task Interruption.....	168
4.9.4.18	CONV– BI moderation of Task Interruption.....	170
4.10	Summary of hypothesis Test.....	173

**Chapter five**

5.1	Introduction.....	175
5.2	Summary of major findings.....	175
5.3	Discussion of the major findings.....	180
5.3.1	Relationship between TAM – M-banking adoption.....	180
5.3.2	Relationship between Subjective Norms – M-banking adoption.....	183
5.3.3	Relationship between Service Quality – M-Banking adoption.....	184
5.4	Moderation effect of Situational factors.....	187

5.4.1	Moderation effect of Waiting Time.....	187
5.4.2	Moderation effect of Task Interruption.....	188
5.5	Theoretical implications.....	188
5.6	Managerial implications.....	191
5.7	limitations and recommendation of the study.....	193
5.8	Conclusion.....	194
BIBLIOGRAPHY.....		195
Appendix.....		215
Appendix A:	Questionnaire.....	215
Appendix B:	SPSS Outputs.....	219

## **List of tables**

1.1	Review on related studies to mobile banking adoption/intention.....	13
1.2	Salient factors affecting behavioral intention of mobile banking.....	15
2.1	Categories and examples of SST in the use.....	24
2.2	Factors influencing internet –banking adoption.....	35
3.1	Target population.....	95
3.2	Sample size of the study.....	97
3.3	Perceived use fullness measurement.....	99
3.4	Perceived ease of use measurement.....	100
3.5	M-Banking adoption measurement.....	101
3.6	Perceived risk measurements.....	101
3.7	Perceived trust measurement.....	102
3.8	Subjective norms measurements.....	103
3.9	Reliability dimension measurement.....	103
3.10	Responsiveness dimension measurements.....	104
3.11	Efficiency dimension measurement.....	105
3.12	Convenience dimension measurements.....	106
3.13	Situational factors measurements.....	107
3.14	Interpretation of the mean values.....	109
3.15	Meanings of the values of correlation coefficient.....	109
4.1	Profile of respondents.....	114
4.2	Mobile banking usage.....	116
4.3	Sampling adequacy for TAM.....	117
4.4	Descriptive statistics and communalities for TAM dimensions.....	118
4.5	Factor analysis for TAM.....	120
4.6	Sampling adequacy for Service Quality.....	121
4.7	Descriptive statistics and communalities for Service quality dimensions.....	122
4.8	Factor analysis for Service Quality.....	124
4.9	Sampling adequacy for Subjective Norms.....	125



4.10	Descriptive statistics and communalities for subjective norms dimensions.....	125
4.11	Factor analysis for Subjective norms dimensions.....	127
4.12	Sampling adequacy for Situational Factors dimensions.....	128
4.13	Descriptive Statistics and communalities for situational factors.....	128
4.14	Factor Analysis for situational factors.....	130
4.15	Sampling adequacy for m-banking adoption.....	130
4.16	Factors analysis for m-banking adoption.....	132
4.17	Cronbach’s alpha for the study variables.....	134
4.18	Zero-order Correlations among all variables.....	138
4.19	Normality test using Skewness and Kurtosis.....	139
4.20	Multiple regression analysis for M-banking adoption with the four predictors from TAM with control variables.....	144
4.21	Multiple regression analysis for M-banking adoption with the two predictors of subjective norms with control variables.....	144
4.22	Multiple regression analysis for M-banking adoption with the three predictors from service quality with control variables.....	147
4.23	Model Summary of moderating effect of waiting time on Perceived Usefulness- M-banking adoption relationship.....	149
4.24	Hierarchical Regression: Moderating of waiting time on the Relationship between perceived usefulness and M- banking adoption .....	149
4.25	Model Summary of moderating effect of waiting time on Perceived Ease of Use - M- banking adoption relationship.....	150
4.26	Hierarchical Regression: Moderating of waiting time on the Relationship between perceived ease of use and M- banking adoption .....	151
4.27	Model Summary of moderating effect of waiting time on Perceived Trust – M-banking adoption relationship.....	152
4.28	Hierarchical Regression: Moderating of waiting time on the Relationship between perceived trust and M- banking adoption .....	152
4.29	Model Summary of moderating effect of waiting time on Perceived Risk- M-banking adoption relationship.....	153

4.30	Hierarchical Regression: Moderating of waiting time on the Relationship between perceived risk and M- banking adoption .....	154
4.31	Model Summary of moderating effect of waiting time on Descriptive Norms- M-banking adoption relationship.....	155
4.32	Hierarchical Regression: Moderating of waiting time on the Relationship between descriptive norms and M- banking adoption.....	155
4.33	Model Summary of moderating effect of waiting time on Injunctive Norms –M-banking adoption relationship.....	156
4.34	Hierarchical Regression: Moderating of waiting time on the Relationship between injunctive norms and M-banking adoption.....	157
4.35	Model Summary of moderating effect of waiting time on Reliability- M-banking adoption relationship.....	157
4.36	Hierarchical Regression: Moderating of waiting time on the Relationship between reliability and M-Banking adoption.....	158
4.37	Model Summary of moderating effect of waiting time on Efficiency – M-banking adoption relationship.....	159
4.38	Hierarchical Regression: Moderating of waiting time on the Relationship between efficiency and M-banking adoption.....	159
4.39	Model Summary of moderating effect of waiting time on Convenience – M-Banking adoption relationship.....	160
4.40	Hierarchical Regression: Moderating of waiting time on the Relationship between convenience and M-banking adoption.....	161
4.41	Model Summary of moderating effect of Task interruption on Perceived Usefulness – M-banking relationship.....	162
4.42	Hierarchical Regression: Moderating of Task interruption on the Relationship between perceived usefulness and behavioral intention.....	162
4.43	Model Summary of moderating effect of Task interruption on Perceived Ease of Use - M- banking adoption relationship.....	163
4.44	Hierarchical Regression: Moderating of Task interruption on the Relationship between	

	perceived ease of use and M- banking adoption .....	163
4.45	Model Summary of moderating effect of Task interruption on Perceived Trust - M- banking adoption relationship.....	164
4.46	Hierarchical Regression: Moderating of Task interruption on the Relationship between perceived trust and M- banking adoption .....	165
4.47	Model Summary of moderating effect of Task interruption on Perceived Risk- M-banking adoption relationship.....	165
4.48	Hierarchical Regression: Moderating of Task interruption on the Relationship between perceived risk and M- banking adoption .....	166
4.49	Model Summary of moderating effect of Task interruption on Descriptive Norms- M-banking adoption relationship.....	167
4.50	Hierarchical Regression: Moderating of Task interruption on the Relationship between descriptive norms and M- banking adoption.....	167
4.51	Model Summary of moderating effect of Task interruption on Injunctive Norms – M-banking adoption relationship.....	168
4.52	Hierarchical Regression: Moderating of Task interruption on the Relationship between injunctive norms and M-banking adoption.....	168
4.53	Model Summary of moderating effect of Task interruption on Reliability- M-banking adoption relationship.....	169
4.54	Hierarchical Regression: Moderating of Task interruption on the Relationship between reliability and M-Banking adoption.....	169
4.55	Model Summary of moderating effect of Task interruption on Efficiency – M-banking adoption relationship.....	170
4.56	Hierarchical Regression: Moderating of Task interruption on the Relationship between efficiency and M-banking adoption.....	171
4.57	Model Summary of moderating effect of Task interruption on Convenience – M-Banking adoption relationship.....	172
4.58	Hierarchical Regression: Moderating of Task interruption on the Relationship between convenience and M-banking adoption.....	172

4.59	Summary of hypothesis results.....	178
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**List of figures**

2.1	Original TAM.....	58
2.2	First Modified TAM.....	58
2.3	Final version of TAM.....	59
2.4	Original model for Theory of Reasoned Action.....	64
2.5	Conceptual framework of the study.....	74
3.1	Sample size formula.....	97
4.1	Scree plot for TAM.....	118
4.2	Scree plot for Service Quality.....	122
4.3	Scree plot for Subjective Norms.....	126
4.4	Scree plot for Situational Factors.....	128
4.5	Scree Plot for m-banking adoption.....	130
4.6	Modified frame work of the study.....	132
4.7	Interaction effect of Task Interruption on Efficiency – M-banking.....	169

## **ABSTRACT**

The main objective of this study was to examine the moderating effect of situational factors as well as the influential factors that affect the consumers' intention to adopt a self-service technology (SST) taking mobile banking as an example, drawing on the information systems use and acceptance literature.

Specifically, this study addressed several sub-objectives such as 1) to explore the determinants of mobile banking adoption among Sudanese; 2) to examine the effect of service quality dimensions (reliability, responsiveness, efficiency, and convenience) on the Sudanese's intention to adopt mobile banking service; 3) to measure the effect of TAM constructs (perceived usefulness and perceived ease of use, perceived trust and perceived risk) on Sudanese's intention to adopt mobile banking services; 4) to explore the effect of subjective norms (descriptive norms and injunctive norms) on Sudanese's intention to adopt mobile banking services; and finally 5) to test the moderating effect of situational factors (waiting time and task interruption) on the relationship between the main the independent variables (service quality dimensions, TPB constructs, and TAM-related constructs) and dependent variable (behavioral intention).

By using the stratified random sampling procedure, this study collected the data from 349 customers of mobile banking services provided by Faisal Islamic Bank and Al-Salaam Bank who were the only two banks applying the service during the data collection period, the customers had participated and filled the questionnaires measuring the underlying factors that contribute to the respondents' behavioral intentions to adopt mobile banking services as well as the moderating effect of situational factors.

This study presented nine main hypotheses with several sub hypotheses to test the proposed conceptual framework of mobile banking adoption and its predictor and moderators. All hypotheses were tested with multiple regression analysis, controlling for demographic factors such as age, gender, education, experience with the banking, as well as experience with the mobile banking.

Among the TAM related constructs, perceived ease of use, perceived usefulness and perceived risk had significantly contributed towards mobile banking adoption among the participants of this study. Perceived usefulness was not a predictor of the dependent variable. It is notable here also that perceived risk negatively predicted the adoption, which means that the higher the risk associated with the usage of the technology, the less likely that the consumers adopt the service. However, the effect of other potential influencers were controlled such as gender, age, education, experience with the banking and experience with mobile banking and were found to have minimal effect on the dependent variable. This indicates that the predictors accounted for the majority of the variance in behavioral intention.

Subjective norms dimensions such as descriptive norms and injunctive norms were found to have no significant contribution towards the adoption of mobile banking among the consumers in the country. In addition, the control variables were not predicting the dependent variable, which means that they have influence on how people adopt the mobile banking technology. Therefore, this findings suggests that significant others or peers have no influence on the participants of this study to adopt mobile banking technology, which don't consider it as a motivating factors towards adoption.

Two dimensions of service quality namely reliability and efficiency had significantly contributed towards participants' behavioral intention of adopting mobile banking technology. Convenience dimension did not exert any effect on the adoption process among the participants, which means that they don't care about whether the service usage is convenient or not, but they are more concern that the

service should be efficient and reliable. Another dimension (responsiveness) has been eliminated during validation process due to its failure to meet the minimum standard criteria.

The study was also interested to test the moderating effect of situational factors on the relationship between independent variables and dependent variable. Using hierarchical regression analysis, the results suggested that there were no moderating effects for the majority of hypothesized relationships except the relationship between efficiency and behavioral intention which was negatively and significantly moderated by task interruption. This indicates that the more participants task higher interruption, the less likely to adopt mobile banking technology. On the other hand, situational factors such as waiting time and task interruption did not improve or reduce the relationship between the independent variables and dependent variable, which means that these independent variables contribute to behavioral intention without any need for interacting effects from other factors.

## المستخلص

الهدف الاساسي من هذا البحث هو دراسة ابعاد جودة الخدمة ، المعايير الشخصية و نموذج تقبل التقنية كمحددات لتبني تقنية الخدمة الذاتية ، متناولة خدمة الهاتف المصرفي كمثل لتقنيات الخدمة الذاتية ، مع دراسة الدور المعدل للعوامل الموقفية و ذلك استناداً على المعلومات التي تم بحثها عن استخدام نظم المعلومات في الدراسات السابقة .

الدراسة قامت بتحديد عدة اهداف فرعية مثل (1) معرفة محددات تبني خدمة الهاتف المصرفي في المجتمع السوداني. (2) دراسة اثر ابعاد جودة الخدمة (الموثوقية – سرعة الاستجابة – الكفاءة – الملائمة ) على تبني الخدمة . (3) قياس اثر مكونات نموذج قبول التقنية ( الاستفادة – سهولة الاستخدام – الموثوقية – المخاطرة ) على مدى تبني السودانيي لخدمة الهاتف المصرفي (4) معرفة اثر المعايير الشخصية (المعايير الوصفية – المعايير الدخيلة ) على تبني خدمة الهاتف المصرفي و اخيراً (5) دراسة الدور المعدل للعوامل الموقفية (زمن الانتظار – تذبذب الخدمة ) على العلاقات بين المتغيرات المستقلة و المتغير التابع .

باستخدام العينة العشوائية تم جمع المعلومات من 349 عميل بنكي من بنك فيصل الاسلامي و مصرف السلام حيث كانوا هم البنوك الوحيدة التي تقدم الخدمة في وقت جمع المعلومات للدراسة . افترضت الدراسة 9 افتراضات رئيسية بحسب الاطار النظري للبحث و ذلك لدراسة محددات تبني الخدمة و الدور المعدل لتبني خدمة الهاتف المصرفي .

مكونات نموذج قبول التقنية (TAM) كان هناك اثر لسهولة الاستخدام و الموثوقية و المخاطرة على تبني الخدمة لدى السودانيي و تجدر الاشارة هنا الى العلاقة السالبة بين المخاطرة و تبني الخدمة اي كلما زادت المخاطرة كلما قل احتمال تبني الخدمة . ايضا توصلت الدراسة الى انه لا يوجد اي اثر للاستفادة على تبني خدمة الهاتف المصرفي . فضلاً عن ذلك تم تحكيم العلاقة بين المتغير المستقل و المتغير التابع عن طريق بعض العوامل الديموغرافية مثل النوع و



السن و المستوى التعليمي و الخبرة مع البنوك و الخبرة مع خدمة الهاتف المصرفي و لكن لم يغير التحكيم في النتائج

ابعاد المعايير الشخصية ( المعايير الوصفية – المعايير الدخيلة ) لم يكن لها اي اثر على تبني الخدمة لدى السودانيين حيث لم تكن تلك المعايير بمثابة حافز لدعم فكرة تبني خدمة الهاتف المصرفي .

اثنين من ابعاد متغير جودة الخدمة كانت لهم المساهمة الاكبر في التأثير على تبني الخدمة و هم الموثوقية و الكفاءة ، اما الملائمة فلم يكن لها اي دور فعال لدي المشاركين اي لم يكن من الضروري ملائمة الخدمة لديهم. اما البعد الرابع و هو سرعة الاستجابة فقد تم استبعاده منذ المراحل الاولى للتليل العاملي للمتغيرات فضلاً عن ذلك تم تحكيم العلاقة بين المتغير المستقل و المتغير التابع عن طريق بعض العوامل الديموغرافية مثل النوع و السن و المستوى التعليمي و الخبرة مع البنوك و الخبرة مع خدمة الهاتف المصرفي و لكن لم يغير التحكيم في النتائج .

اهتم البحث ايضا بدراسة الدور المعدل للعوامل الموقفية على العلاقات بين المتغيرات المستقلة و المتغير التابع و توصلت الدراسة الى انه لا يوجد اي تاثير لها على الاغلبية العظمى من الفرضيات ماعدا الدور المعدل لتذبذب الخدمة على العلاقة بين بعد الكفاءة في متغير جودة الخدمة و المتغير المستقل (تبني خدمة الهاتف المصرفي) ، بمعنى انه كلما زاد تذبذب الخدمة كلما قل احتمال تبني الخدمة . فيما عدا ذلك لم يكن هناك اي دور معدل لكلا ابعاد العوامل الموقفية و هم زمن الانتظار و تذبذب الخدمة بمعنى ان المتغيرات المستقلة تؤثر مباشرة على المتغير التابع بدون اي تدخل لاي من تلك العوامل الموقفية .