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Exploring Factors Influencing Mobile-Banking Usage among PAAET College of Business Studies Students

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Abstract: This study aims to examine the penetration of mobile banking applications usage among PAAET College of business studies students. A panel data, obtained using questioner, is used to examine the relationship between the number of times students use their mobile banking applications in conducting bank transactions per week against number of factors. Results obtained from this research indicates that, out of the ten factors examined, students age had a statistically significant direct relation with the number of times students use their m-banking applications and that students living in capital province use their m-banking application more often than other provinces in Kuwait.
Keywords: College students, PAAET, Mobile-Banking, Bank mobile application, Kuwait.

1. Introduction

Smart phones have become essential in our daily lives, they tend to facilitate many tasks that would in normal circumstances takes much of our time and efforts. Going to the bank branch is one of these tasks that consumes considerable time due to waiting period before reaching the counter. Banks try their best to provide their customers with convenient methods to conduct their banking transactions remotely without setting a step in the bank branch. Not only so, banks nowadays are waving some of the transaction fees if the transaction was conducted through either their websites or their mobile applications. Such incentives are favorable for both the bank and the customer, while the bank reduces the cost of hiring more staff in their retail sector, they also try to reduce the number of customers visiting their branches for simple transactions. For customers, conducting their banking transactions through their PC's or smart phones would save them time, effort, and also money.

Nel et al. (2012) defined mobile banking as a digital banking channel that mainly involves performing financial transactions remotely using an application downloaded onto a mobile device such as an iPad or tablet, or smart phone. Charles et al. (2007) defined mobile banking as a channel in electronic banking that provides a convenient way of performing banking transactions, which is also known as "pocket-banking". Based on Lee et al. (2015) m-banking enhances customer satisfaction and helps banks retaining their customers and attract new ones and also enables the bank to maintain a competitive position in the market. In addition, providing new products that facilitates customers' needs would lead to an increase in market share, profitability and cost reduction to the bank (Bayraktar et al., 2012). Malaquias and Hwang (2016) stated that m-banking has the potential of improving customers' quality of life and bringing efficiency to banks.

College students are the next working force in any economy, banks work hard to attract such clients as early as possible since it has been known that once a student opens an account in any bank he/she would maintain the same account after graduation and entering the employment phase. During the college years, student accounts are considered to be a liability to banks since they are not allowed to take any loans and for that banks cannot generate any interest on loans which is the main source of revenue for any bank. Students at the college of business studies at PAAET in Kuwait receive a monthly allowance from the Kuwaiti government during their study years and these allowances are credited to the student bank account and for that all students must have a bank account.

2. Research Questions

This study is set to examine the following hypotheses:

$1 - H_0$ That there is no statistically significant relation between student gender and mobile banking applications usage.

$2 - H_0$ That there is no statistically significant relation between student age and mobile banking applications usage.

$3 - H_0$ That there is no statistically significant relation between the province the student lives in and mobile banking applications usage.

$4 - H_0$ That there is no statistically significant relation between type of high school the student graduated from and mobile banking applications usage.

$5 - H_0$ That there is no statistically significant relation between student major in high school (science or literature) and mobile banking applications usage.

$6 - H_0$ That there is no statistically significant relation between student high school GPA and mobile banking applications usage.

$7 - H_0$ That there is no statistically significant relation between the student college major and mobile banking applications usage.

$8 - H_0$ That there is no statistically significant relation between student college GPA and mobile banking applications usage.

$9 - H_0$ That there is no statistically significant relation between the bank the student has his account in and mobile banking applications usage.

$10 - H_0$ That there is no statistically significant relation between student smart phone operating system and mobile banking applications usage.

3. Research Methodology

This research is set to examine the relation between m-banking adaptation against number of variables. OLS regression is used to examine such a relation using a panel data that was collected using questioner distributed to students at the college of business studies. The model is set as follows;

$$MBA = \alpha + \beta V_{1 \to n} + \varepsilon \quad (1)$$

Where, *MBA* is m-banking adaptation that is the number of times student uses his/her m-banking application per week and *V* is the variable that is set to examine its effect.

4. Data and Empirical Results

The data used in this research were gathered using questioner distributed to students at the college of business studies at the Public Authority for Applied Education and Training (PAAET) in Kuwait during the first semester of the academic year 2019-2020. 256 questioners were distributed but there was only 220 valid questioners while 36 questioners were omitted due to incomplete information's.

Summary of the questioner results are presented in table 1. Out of the 220 results collected, 114 (51.82%) of the responds were female students. It can also be seen that male students use, on average, their m-banking applications 2.25 times compared to 1.94 times for female students. When it comes to student age, it can be seen that most of the sample participants were between the age 20-24 years, but by looking at the numbers it can be seen that older users aged above 24 years were the most active users of their m-banking applications. Kuwait is made of 6 provinces and it can be seen that most of the sample students live in Jahra and Ahmadi provinces but the most active users were in the capital and Hawally provinces. Private schools tend to have a reputation that their students are more technology oriented than public schools students. But by looking at the table, it can be seen that students graduating from public schools use their m-banking applications more often than private schools students. In the high school system in Kuwait there are two concentrations, in the science major students study mathematics, physics', chemistry, biology, and other subjects while literature major students learn linguistics, psychology, geography and other subjects. But while science major students

are supposed to be more technology oriented, literature major students were more active in using their m-banking applications.

Students at the college of business studies can choose to major in many subjects, and from the table it can be seen that computer science and banking major students were the most active students in using their m-banking applications and that is logical since they are the two majors that are closely related to m-banking. Although there are ten banks operating in Kuwait, not including foreign banks branches, it can be seen that the students from the sample had accounts in seven banks. Boubyan bank dominated students' accounts with 51.57% of the students followed by National bank of Kuwait at 22.42%. When bank launch their m-banking applications they are often release them in both android google play and Apples' app store. Although Apple smart phones are more expensive than most of the android based phones, 88.64% of the students use Apple phones which can be explained by the high income per capita in Kuwait.

Table 1. Questioner Results

Category	Sub-Category	Frequency	Percentage %	Average Weekly Use
Gender	Male	106	48.18	2.25
	Female	114	51.82	1.94
Age	Below 20	101	45.91	2.08
	20-24	104	47.27	1.91
	Above 24	15	6.82	3.40
Province	Capital	38	17.27	3.13
	Hawally	30	13.64	2.63
	Farwaniyah	33	15.00	1.94
	Mubarak AlKabeer	19	8.64	1.89
	Jahra	48	21.82	1.77
	Ahmadi	52	23.64	1.48
High School Type	Public	186	84.55	2.23
	Private	34	15.45	1.41
High School Major	Science	51	23.18	1.67
	Literature	169	76.82	2.20
College Major	Banking	36	16.36	2.39
	Computer Science	24	10.91	2.54
	Management	32	14.55	1.47
	Law	81	36.82	1.85
	Accounting	47	21.36	2.26
Bank	Boubyan Bank	115	51.57	2.29
	Kuwait Finance House	33	14.8	2.30
	Ahli United Bank	3	1.35	0.33
	National Bk of Kuwait	50	22.42	1.84
	Gulf Bank	6	2.69	1.50
	Commercial Bank	10	4.48	1.50
	Burgan Bank	6	1.67	1.67
Operating System	Android	25	11.36	1.72
	IOS	195	88.64	2.14

Literature shows that male users are more active in using m-banking than females, such findings were reported by many such as Wan et al. (2005) that found that males were more inclined in adopting bank technology than females, and also Pijpers et al. (2001) found that males are more positive about m-commerce than females. On the other hand, Faqih and Jaradat (2015) investigated the gender effect on the adoption of mobile commerce in a developing country context and concluded that gender does not have any effect on the adoption process. Tam and Oliveira (2016) using the data of 256 users, found no statistically significant relation between m-banking adaptation and users gender. Results presented in table 2, shows that student gender does not have any effect on m-banking adaptation which is in line with Faqih and Jaradat (2015) and Tam and Oliveira (2016) findings.

Table 2. Gender Effect Results

Regression Statistics		*F*	*Significance F*	
Multiple R	0.068	1.003	0.318	
R Square	0.005			
Adjusted R Square	0.000			
Standard Error	2.339			
Observations	220			
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	1.939	0.219	8.849	0.000
Gender	-0.316	0.316	-1.002	0.318

When it comes to effect of users' age on the m-banking adaptation, Howcroft et al. (2002) revealed that younger consumers value the convenience or time saving potential of online and mobile banking more than older consumers. Sraeel (2006) also found that younger people (aged 25–34) are particularly interested in mobile-banking. Mkpojiogu et al (2016) used the data of 150 users in three banks in Nigerian banks and found statistically significant differentials in the perceived satisfaction of mobile banking users based on the apps used, age, gender, experience and educational qualification. These factors had significant effect on the level of perceived user satisfaction of m-banking applications. Results presented in table 3, indicates that there is a statistically significant direct relation between the user age and the number of times he/she uses their m-banking application. These results supports Sraeel (2006) findings.

Table 3. Age Effect Results

Regression Statistics		*F*	*Significance F*
R Square	0.049	11.124	0.001
Adjusted R Square	0.044		
Standard Error	2.287		
Observations	220		

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-1.157	0.986	-1.173	0.242
Age	0.160	0.048	3.335	0.001

Kuwait is relatively a small country of about 17,818 KM^2, unlike vast area countries such as Russia or the U.S. finding a bank branch nearby is bit difficult and for that m-banking is crucial for bank clients that live far from the closest branch. Petersen and Rajan (2002) found that internet and mobile banking helped reduce the effect of geographical proximity and direct communication concerns in the U.S. lending market. Results presented in table 4, show that there is statistically significant direct relation between the province student live in and the number of times he/she uses the m-banking application but that relation was only valid for students living in the capital province.

Table 4. Residency Area Effect

Regression Statistics		*F*	*Significance F*
R Square	0.235	2.888	0.010
Adjusted R Square	0.183		
Standard Error	2.290		
Observations	220		

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	1.895	0.525	3.606	0.000
Capital	1.258	0.409	3.073	0.002
Hawally	0.628	0.459	1.369	0.172
Farwaniyah	-0.178	0.442	-0.403	0.687
Mubarak AlKabeer	-0.215	0.563	-0.382	0.703
Jahra	-0.409	0.382	-1.073	0.285
Ahmadi	-0.799	0.368	-2.171	0.031

In examining the effect high school type student attended in using m-banking application, where the assumption here is that students graduating from private schools are more technology oriented than public school students. It can be seen from table 5, that such a relation does not exist and that the type of high school student attended does not have any statistically significant relation with the student m-banking adaptation.

Table 5. High School Type Effect

Regression Statistics		*F*	*Significance F*
R Square	0.020	2.169	0.117
Adjusted R Square	0.011		
Standard Error	2.327		
Observations	220		

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	1.098	0.169	9.876	0.000
HS Type	0.475	0.157	1.561	0.117

High school students majoring in science would indicate that they are more likely to be more technology oriented and for that would be using m-banking more often. Results shown in table 6, suggests that such a relation does not exist and that students high school concentration does not have any statistical significance there.

Table 6. High School Major Effect

Regression Statistics		*F*	*Significance F*	
R Square	0.010	2.196	0.140	
Adjusted R Square	0.005			
Standard Error	2.333			
Observations	220			
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	2.219	0.179	12.366	0.000
HS Major	0.552	0.373	1.482	0.140

It is widely assumed that smart students tend to be the ones with the highest grade point average (GPA), and for that there is a believe that there is a direct relation between a student IQ and his/her GPA at school. Based on that believe, this research assumes that smart students would avoid wasting their time and effort in conducting their bank transaction physically in the bank branch when they can do it from their phones. By looking at table 7, it can be seen that such assumption is not valid, at least for the students sample used.

Table 7. High School GPA Effect

Regression Statistics		*F*	*Significance F*	
R Square	0.005	1.170	0.281	
Adjusted R Square	0.001			
Standard Error	2.338			
Observations	220			
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	3.915	1.695	2.311	0.022
HS GPA	-0.026	0.024	-1.081	0.281

The college of business studies offers many study majors, but m-banking is more related to banking and computer science majors. Arvind et al. (2014) conducted a study on m-banking adaptation among college students in India and found that only 20% of students use mobile banking and that science major students were the students that more often use

m-banking followed by commerce major and art major were the least using m-banking. By looking at the results in table 8, it can be seen that student major does not have any statistically significant effect on m-banking adaptation.

Table 8. College Major Effect

Regression Statistics		*F*	*Significance F*
R Square	0.023	1.018	0.408
Adjusted R Square	0.000		
Standard Error	2.339		
Observations	220		
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	1.111	0.780	1.425	0.156
Banking	1.278	0.872	1.466	0.144
CS	1.431	0.914	1.565	0.119
Management	0.510	0.892	0.571	0.569
Law	0.837	0.824	1.016	0.311
Accounting	1.244	0.854	1.457	0.146

Again re-testing the student GPA effect on m-banking adaptation, but that time using college GPA. Results shown in table 9 gives the same results that student college GPA does not have any effect on m-banking adaptation.

Table 9. College GPA Effect

Regression Statistics		*F*	*Significance F*
R Square	0.19	0.976	0.435
Adjusted R Square	0.13		
Standard Error	2.612		
Observations	220		
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	2.388	1.019	2.345	0.021
College GPA	-0.020	0.375	-0.052	0.958

Banks try their best to maintain and increase their customer base, providing a secured and user friendly m-banking application would help them achieve such goals. While results from table 1 shows that Boubyan bank had the highest number of accounts, this domination does not have any effect on their customers' adaptation to their m-banking application but that domination was a result of other factors such as aggressive marketing campaign toward college students as shown in table 10.

Table 10. Bank Effect

Regression Statistics		*F*	*Significance F*	
R Square	0.021	0.663	0.703	
Adjusted R Square	-0.011			
Standard Error	2.352			
Observations	220			
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	2.033	0.931	2.183	0.030
Boubyan Bank	0.265	0.929	0.285	0.776
Kuwait Finance House	0.277	0.994	0.278	0.781
Ahli United Bank	-1.700	1.647	-1.032	0.303
National Bk of Kuwait	-0.214	0.921	-0.233	0.816
Gulf Bank	-0.577	1.238	-0.466	0.642
Commercial Bank	-0.533	1.192	-0.447	0.655
Burgan Bank	-0.366	1.338	-0.274	0.785

Regardless of whether it is true or not, it is widely believed among students that application installed from Apples' app store are more secured that those installed from Google play store. Er-rajy et al (2017) examined 100 mobile banking applications from the Google Play Store, out of which 50 applications were Moroccans, 30 were Tunisians and 20 were Algerians. They found that 82% of the applications asked for at least one dangerous permission, which indicates that users are accustomed to installing applications with Dangerous permissions. Based on that assumption, it would be expected that Apples' IOS users would use their m-banking application more often and Google based smart phones users would use their m-banking applications less since they are less secured. Results presented in table 11 shows that this assumption does not apply and that there is no relation between the smart phone operating system and the m-banking adaptation.

Table 11. Mobile Operating System Effect

Regression Statistics		*F*	*Significance F*	
R Square	0.001	0.161	0.851	
Adjusted R Square	-0.013			
Standard Error	2.242			
Observations	220			
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	3.112	0.194	16.066	0.000
Android	-0.245	0.610	-0.402	0.688
IOS	0.418	0.497	0.842	0.401

5. Conclusion

The aim of this study is to examine the effect of ten factors on mobile-banking usage among students at the college of business studies at PAAET in Kuwait. Based on a questioner that was distributed to the students, results showed that there was a statistically significant positive relation between student age and the number of times the student uses his/her m-banking application. The results also showed that students living in the capital province use their m-banking application more than students in other provinces.

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