# THE ROLE OF E-BANK SERVICES IN ACHIEVING STUDENT'S SATISFACTION AND THEIR INTENTION TO USE THESE SERVICES IN CYPRUS INTERNATIONAL UNIVERSITY (IŞ BANK CASE STUDY)

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**Abstract-** This study investigated the main electronic banking services, which are used by students in school, and its impact on students' satisfaction at Cyprus International University.It depends on the analytical descriptive methodology to achieve research's objectives. The research community is composed of students at the Cyprus International University, who use the electronic bank services in the IŞ Bank of Cyprus. The SMS ("Simple Random Sample") techniuque is used to identify the target group of the current reserach, and a survey is designed to collect valid data from the study sample. (394) Samples are distributed, neither queistionaire are brought back nor are neglected because these surveys are completed online on computer's library, thus, the surveys valid for analysis are (384). It is noteworthy that this research paper carries out the needed statistical treatment to fit the main research's objectives. The most important results the research found that ATM service , E-payment srvive, and SMS Service which are used by IŞ Bank's customers (CUI unienersity'students) in the Northern Cyprus play significant role in achieving the students' satisfaction.Also, this study found that satisfaction have an important role in increasing their intention to use e-bank services. These results; in turns, help management in IŞ Bank to find other services and to develop the current ones in order to reach the target of achieving students' satisfaction .

**Keywords-** E-bank Services, Students' satisfaction, Intention to Use

## I. INTRODUCTION

Banks is an impotant and central part of investment process in the current times, and they are also significant in country's economy of any country on the national, regional, and global [1]. Because of the technological and economic changes that are globally witnessed, banks are forced to coincide with these developments to improve their performance, businesses, and to keep their competitive ability in the national as well as international markets[2]. Banks are also forced to spend more of their expenditure to match with these changes to be able to achieve the best revenues and to attract the largest numbers of new clients [3, 4].

It can be said that development in technology becomes signifint variable that contributes in achieving an essential change in the methods of the banking work in the era of the rapid developments [5]. Therefore, banks pay their great attention and increase their investments in the most developed techniques in the fields of information technology, telecommunication, computers to create new banking services and to develop the ways of presenting them in a way that guarantees the flow of services from banks to clients accurately, simply, and easily[6].This, in turns, accompanies with the current and increasing requirements of the their customers. Add to this, it achieves increasing growth of the bank in its business and benefits of bnks[7, 8].

This study, as a result, seeks to examine the impact of electronic bank services that IŞ Bank presents to its clients: students of Cyprus International University. In other words, it tests IŞ Bank ability in achieving students' satisfaction and their intention to use these services. Then, it suggests many recommendations with regards to this topic and this; in turns, will push IŞ Bank forward. Pushing the wheel of this bank and the other banks of Cyprus will help develop the economy of the North Cyprus, the country which depends to a certain degree, on the sector of higher education.

## II. THE PROBLEM OF THE STUDY AND ITS QUESTIONS

E-Bank services refer to providing or introducing existing banking products or financial transactions by using new innovative technology in order to enhance their operations to reduce costs and efforts[9, 10]. Because of the highly competitive rivalry among the sector of banks of Cyprus in terms of introducing services to clients, students in particular, and because of the similarity among these services, Cypriot banks; such as, Kıbrıs Continental Bank, Near East Bank, Kıbrıs İktisat Bankası, should try their best to develop their services. They; also, need to exert their best efforts by finding new innovative ways to provide their services to their customers in order to cope with the rapid developments, and to continue the maintenance of their clients, and to compete with the other banks. However, operating banks inside universities, which are a university service, neglect the issue of students' satisfaction. They do not bear into mind the matter of students' satisfaction, which is an essential necessity of student body, at each

Cypriot university. And here, the problem of a lack of clarity in the relationship between e-services provided by banks and creating students' satisfaction come into surface. Depending on this, this research seeks to identify and question the issue of students' satisfaction at Cyprus International University with the operations given by IŞ Bank of Cyprus. Therefore, it is a comprehensive study of all of the given financial services provided by a Cypriot bank, IS Bank, at Cyprus International University.

- First: What are the electronic bank services that achieve the highest degree of satisfaction among students?
- Second: To what extend does IŞ Bank as a commercial bank achieve the level of students' satisfaction as a result of the use of the electronic bank services from the student's view point as a mainly customer inside university?
- Third: To what extend does the level of students' satisfaction will impact their intention to use of the electronic bank services inside the university?

## III. THE IMPORTANCE OF THE STUDY

The importance of scientific studies lies in the reflections and benefits achieved after applying and carrying them. As for this study, it deeply analyzes a recent issue which is of high significance to the Turkish Republic of Northern Cyprus.This Island that witnesses rapid and notable developments; especially in the sector of education for many reasons. Northern Cyprus pays attention education because it helps accelerating the wheel of life in that country. Northern Cyprus witnesses a real revolution in education because of the increase in the numbers of institutes of higher education there. Moreover, High quality education, reputable universities, and talented academic staff are essential factors that encourage large numbers of students to choose Northern Cyprus to pursue their undergraduate and postgraduate studies there. In addition, instructors are highly qualified bearing into mind that lots of Cypriots travel abroad to pursue their studies at prestigious and reputable universities. Therefore, Cypriot universities and higher education institutes occupy a notable position among their European counterparts. They; therefore, attract students from the Middle East, Arab countries, Africa to go there and to complete their studies as this island provides a very suitable, safe, and comfortable atmosphere of study. As the student body occupies power and significance, the researcher chooses to investigate students' satisfaction at Cyprus International University. He will apply his sample study Cyprus International University to examine students' satisfaction with the Cypriot banks. It is noteworthy that this study will be the first of its type because of its comprehensiveness and unique portrayal of discussion.

## IV. RELATED STUDIES

This research paper is the first to analyze and to investigate of the effects of electronic bank services that IŞ Bank presents to its client, students of Cyprus International University. Its major target is to examine IŞ Bank ability in achieving students' satisfaction. Therefore, it is important to throw light on the idea of the unique portrayal of this study and to confirm its exceptional discussion. Although other studies depict other similar issues, no study mentions the theme of a university bank's ability to achieve students' satisfaction in Northern Cyprus. Still, reviews of other researchers enrich this study and they are worthy considering them.

A study was conducted by [11] in North Cyprus to evaluate the degree of customer satisfaction on services quality in North Cyprus. To achieve that, SERVQUAL model was used as essential tools to evaluate customer's perception on service quality. A survey was conducted among (207) customers of North Cyprus in major banks. Empirical results exposed that Customer's satisfaction rely on many factors such as good and firm relations and relationship between bank employees and their customer.

Similarly, in North Cyprus, other study was conducted by [12] in North Cyprus to find the impact of employee satisfaction on customer satisfaction. To achieve that, the author developed new variables namely banking functions, wages, communication within the bank, team work, job satisfaction, communication within the bank, training programs, promotion opportunities, wages, and customer loyalty. The result showed that job satisfaction played a significant impact on customer satisfaction and loyalty.

This study was carried out to evaluate the following factors (i.e. brand perception, service quality and perceived value) and their impact on customers' satisfaction in e-banking service settings. Required data was collected by developing a questionnaire which was reviewed by bank's manager and others. And then, it was distributed among bank's customer in order to analyze and propose the results. The software SPSS 19.0 was used to analyze the data [13].

[14] has investigated the factors that affect the command on electronic clients' banking service, and examining the satisfaction of clients and the electronic services used in the banking industry. The research was carried out by surveying a random sample of (450) clients and Likert Standard scale to form these questions. The study tackled demographical and social information about the surveyed group. It concluded with the idea that the

factors of infrastructure, technology and innovation, services and their security, clients' support, and the timing service are of financial advantages which proved to be of a great importance to customers. And this offers a basis to the banks to amend and to issue services wanted by their clients.

A research study was conducted by [7] to find customer's perception about e-banking.this study focused only on online banking activities.To achieve that, a questionnaire was developed to exmine the impact of quality services on customer's choice aamong 300 respondents.In order to analyze data, 5-Likert point scale was adopted whicg range from 1 (strongly disagree) to 5 (strongly agree. the result indicated that the demographic facorse (1) gender (2) education (3) and income play a crucial part in usage of online banking.

According to previous studies, this study focuses on investigating the effect of electronic banking services in the achievement of students' satisfaction at Cyprus International University in the IŞ Bank of Cyprus. This current study is distinguished from other studies because it in depth examines the effects of electronic banking services (Independent Variables) on the students' satisfaction and their intention to use thse services (Dependent Variable) at Cyprus International University, within five electronic banking services that IŞ Bank provides; they are: (ATM service, E-payment service , and SMS service).This study also focuses on the relationship of the electronic bank services to the students as a main bank's customer; in other words, it is a study of business to customer relationship only.

## V. THE PROPOSED RESEARCH MODEL AND HYPOTHESES

The proposed reaearch model in figure (1) elucidates the contributory relationships between independent variables of study incudes: the electronic banking services (ATM service, E-payment service, SMS services) and dependent variables which is the students' satisfaction. Also, the impact of student's satisfaction on their intention to use all services.Moreover, this research will discuss the relationships between E-Bank Services and their impact on students' satisfaction in one side and their impact on their behavior to use these services on the other side. This study also includes demographic variables: (age, gender, marital status, educational qualification, the duration of the client's relationship with the bank, and the nationality) .The proposed model is illustrated in Figure 1.

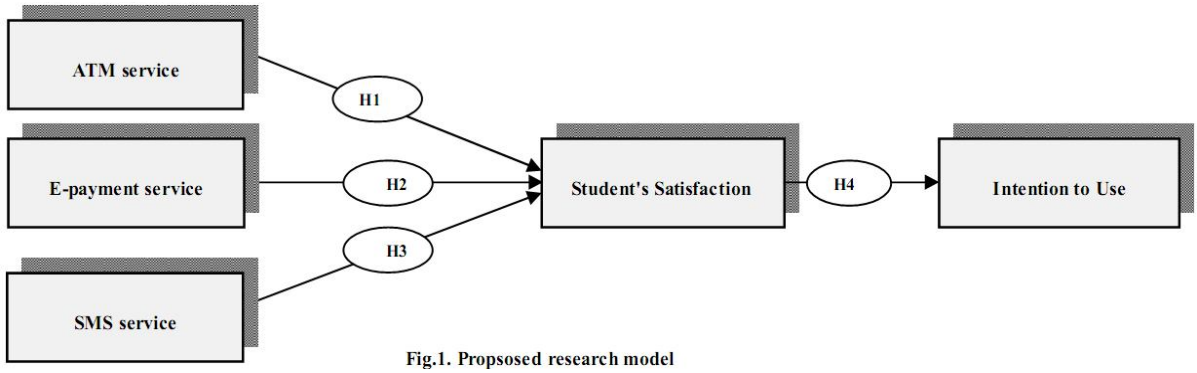



Fig.1. Propsosed research model

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## VI. RESEARCH HYOPOTHESES

According to Research objectives and previous study, this research tested the following hypotheses:

H1: ATM Service use has a positive effect on Students' satisfaction

H2: E-payment service use has a positive effect on Students' satisfaction

H3: SMS Service use has a positive effect on Students' satisfaction

H4: Students' satisfaction has a positive effect on Intention to use electronic bank services.

## VII. METHODOLOGY

This part includes a brief overview of the sample of the study, including the methods used to collect data and information, as well as the statistical methods used to process and analyze the data and extract the results.

### 1.1. Questionnaire

The questionnaire was developed based on literature review in different studies and countries and then was initially reviewed by two expert from to (2) experienced arbitrator of university professors and financial services experts.And then,The questionnaire was written in English language and then translated into Turkish language in order to collect data randomly either from who speak English or Turkish

Electronic questionnaire was distributed as a survey tool among students in Cyprus International University through computer network inside the library which contains (86) personal computers; so

that there is no missing data since it wasn't optional to choose the answers.

**1.2. Scaling Technique**

This study will 5-Likert type scale was adopted which ranged from 1 (strongly disagree) to 5 (strongly agree).in other words, the respondents are given a numerical score, indicating it's agree or disagree for each service, and the scores are totaled to measure the students' satisfaction.

**1.3. Sample**

Sample Random Sampling method (SRS) was used by the study population, which included customers using electronic bank services in Cyprus International University. The sample size was determined based on [15] table has been used to select the sample for research, at 16000 population sample size of (376) were taken into for the collection of data from the respondents.

**1.4. Statistical Techniques:**

Statistical analyzes were carried out using Analysis of Moment Structures (AMOS) V.21.In order to find results out, data were analyzed using A two-stage model building approach.

Firstly, to ensure consistency of the study instrument, the internal consistency analysis was used according to the cronbach Alpha formula to check validty and realaibality. Furthermore, maximum Likelihood Estimation (MLE) was used in this study to estimate both measurements and structural model.

## VIII. RESULT AND DISCUSSION

**1.5. Reliability Test**

In order to achieve research objectives, the reliability of the study instrument was verified by using the (Cronbach Alpha) method by applying the technique on (384) students who has account at (IŞ Bank) and using e-bank services transaction.

**Table 1: Summurise stsitcal analysis and Cronbach's Alpha for research's variables**

| Construct | CR | AVE | Factor loading | Cronbach's Alpha |
|---|---|---|---|---|
| **ATM service** | | | | |
| • Item1 | 0. 847 | 0.650 | 0.897 | 0.705 |
| • Item2 | | | 0.734 | |
| • Item3 | | | 0.668 | |
| **E-payment service** | | | | |
| • Item1 | 0. 819 | 0.533 | 0.675 | 0.828 |
| • Item2 | | | 0.831 | |
| • Item3 | | | 0.659 | |
| **SMS Service** | | | | |
| • Item1 | 0. 768 | 0.533 | 0.541 | 0.705 |
| • Item2 | | | 0.810 | |
| • Item3 | | | 0.807 | |
| **Customer Satisfaction** | | | | |
| • Item1 | 0. 763 | 0.517 | 0.691 | 0.768 |
| • Item2 | | | 0.737 | |
| • Item3 | | | 0.730 | |
| Intention to Use e-bank services | | | | |
| • Item1 | 0. 831 | 0.623 | 0.778 | 0.832 |
| • Item2 | | | 0.713 | |
| • Item3 | | | 0.878 | |

Table1. shows that the overall index of the reliability of the study tool (0.894) which is more than (0.70) [16]. This means that the results of the tool can be adopted and the credibility of the tool is achieved in achieving the objectives of the study. The table showed the scales of Cronbach's Alpha for ATM service is 0.705, E-payment Service is 0.828, SMS Service is 0.705, Customer's Satisfaction is 0.768, and Intention to Use e-bank services with 0.832 is indicated as reliable

To exmine the consrruct validity, two measurements were used the convergent validity and discriminant validity. The result indicate that Composite reliability (CR) for each variable (CR >=0.7) and Variance Extracted values (AVE) (AVE>=0.5).Accordingly, all construct has met all craterias and conditions that means we have a good convegrnt validity.

AMOS is good software to test the goodness fit of proposed model, two measures were used hypothesise paths and variance (R2) for proposed model. This study examine the following six goodness fit measures : the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), x2-square test, the comparative fit index (CFI), the root mean square error of approximation (RMSEA) , and Tuker-lewis Index(TLI).

As shown in table 2, the results indicate that (GFI=0.92), (AGFI=0.91), (x2-square test=1.68), (CFI=0.94), (RMSEA=0.049), and (TLI=0.93). Moreover, all criterias has met the results as shown the table below that means the model has an enouph fit with collected data.

**Table 2: Shows the results of goodness of fit for proposed model**

| Model fit measure | Criteria | Values | References |
|---|---|---|---|
| GFI | >=0.9 | 0.92 | [18 ,17] |
| AGFI | >=0.8 | 0.91 | [18 ,17] |
| $x^2/df$ | >3.0 | 1.68 | [18 ,17] |
| CFI | >=0.9 | 0.94 | [18 ,17] |
| RMSEA | >0.8 | 0.049 | [18 ,17] |
| TLI | >=0.9 | 0.93 | [18 ,17] |

### 1.6. Descriptive analysis

The survey was conducted in Cyprus International University's students. Participants of the survey are 75% male and 25% female of 384 students. 68.8% of participants are from age group 18-25, 25% from age group 26-33and 4.7% belongs to age group 34-41 while 1.6% for age group 42+ . The majority of participants are from different countries (70.3%), while (29.7%) represented Turkish students. And 78.5% of participated students are not married, 7.8% of students are married and 4.7% of students who are in other marital status.68.8% of participants are undergraduate students. 31.2% are master and PhD student. In term of relationship between student and bank account, 32.8% of respondents have their accounts since less than six months, 25.0% since one to two years, 14.1% since two to three years and the other are over than five yearsas shown in Table 3.

**Table 3: Demographic data of participants (N=384)**

| Characteristics | Frequency | % |
|---|---|---|
| **Gender** | | |
| Male | 288 | 75.0 |
| Female | 96 | 25.0 |
| **Age** | | |
| 18-25 | 264 | 68.8 |
| 26-33 | 96 | 25 |
| 34-41 | 18 | 4.7 |
| Over 42 | 6 | 1.6 |
| **Nationality** | | |
| Turkish | 114 | 29.7 |
| Others | 270 | 70.3 |
| ***Status*** | | |
| Single | 336 | 78.5 |
| Married | 30 | 7.8 |
| Others | 18 | 4.7 |
| **Education** | | |
| Undergraguade degree | 264 | 68.8 |
| Graduate studies | 120 | 31.2 |
| **Years of relationship with bank** | | |
| Less than six months | 126 | 32.8 |
| One to two years | 96 | 25.0 |
| Three to four years | 54 | 14.1 |
| Over than four years | 108 | 28.1 |

### 1.7. Hypothesis tests

In order to test hypothesis, correlation coefficient Pearson and linear regression analysis are used to study the impact of electronic banking services on students' satisfaction, tables (4) describes it.

As shown in table 4, the correlation method was adopted to determine discriminant validity for constructs and all of constructs' correlations were below 0.85, which doesn't indicate a poor discriminate validity in Structural Equation Model (SEM) [19].

| | Intention to Use | Customer Satisfaction | ATM service | E-payment service | SMS services |
|---|---|---|---|---|---|
| **Intention to Use** | 1.000 | | | | |
| **Customer Satisfaction** | 0.356 | 1.000 | | | |
| **ATM service** | 0.256 | 0.452 | 1.000 | | |
| **E-payment service** | 0.452 | 0. 460 | 0.345 | 1.000 | |
| **SMS services** | 0.464 | 0 .459 | 0.470 | 0.526 | 1.000 |

H1: ATM Service use has a positive effect on Students' satisfaction

Hypothesis H1 which states that ATM service have an positive effect on Students' satisfaction, the result shows that the ($\beta = .398$, $p < 0.001$), this means that ATM service have positive effect on students' satisfaction, so therefore the hypothesis is accepted and the null hypothesis is rejected.

H2: E-payment service use has a positive effect on Students' satisfaction

Hypothesis H2 which states that E-payment service have an positive effect on Students' satisfaction, the result shows that the ($\beta = .463$, $p < 0.001$), this means that E-payment service have positive effect on students' satisfaction, so therefore the hypothesis is accepted and the null hypothesis is rejected.

H3: SMS Service use has a positive effect on Students' satisfaction

Hypothesis H3 which states that SMS service have an positive effect on Students' satisfaction, the result shows that the ($\beta = .365$, $p < 0.001$), this means that E-payment service have positive effect on students' satisfaction, so therefore the hypothesis is accepted and the null hypothesis is rejected.

H4: Students' satisfaction has a positive effect on Intention to use electronic bank services.

Hypothesis H4 which states that Students' satisfaction have an positive effect on Intention to use electronic bank services., the result shows that the ($\beta = .365$, $p < 0.001$), this means that Students' satisfaction have positive effect on intention to use electronic bank services, so therefore the hypothesis is accepted and the null hypothesis is rejected.

According to figure 2, Students' satisfaction was predicted by SMS service ($\beta = .365$, $p < 0.001$) , E-Payment service ($\beta = .463$, $p < 0.001$) ,and ATM service ($\beta = .398$, $p < 0.001$) . Those variables together explained 48% of the Students' satisfaction ($R2 = 0.48$). Therefore, hypotheses H1, H2.and H3 were supported.also, Students' satisfaction significantly ($\beta = .523$, $p < 0.001$) affects intention to use while explaining 29% of the variance in intention to use. Consequently, hypothesis H4 was supported. In other words, if the bank's management focuses on their customer (students) by increasing their satisfaction, that it will affect CIU's students to increase their intention to use these services.

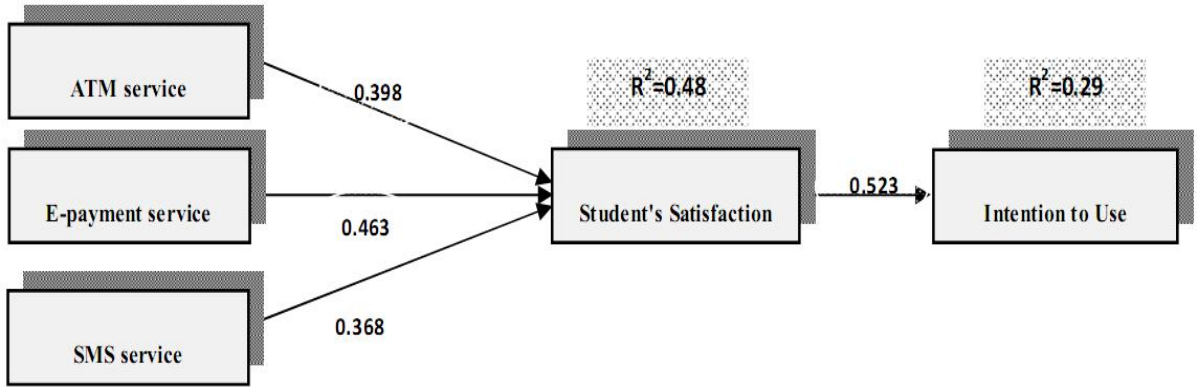



**Fig.2.results of structural proposed model**

## IX. LIMITATION OF THE RESEARCH

Limitations were noted because the result may represent just the students in lefkosia city in North Cyprus. The result of this research is purely based on the information provided by the students from one university. Thus, the result does not fully represent the whole students in North Cyprus as it would include all students from all universitie in North Cyprus.

## CONCLUSIONS

To conclude, this research mainly focuses on the E-banking services from student perspective that influence the stdent's satisfaction which consists of ATM service , E-payment srvive, and SMS Service.The results indicate that ATM service , E-payment srvive, and SMS Service which are used by IŞ Bank's customers (CUI unienersity'students) in the Northern Cyprus play significant role in achieving the students' satisfaction.Also, this study found that students' satisfaction have an important role in increasing their intention to use these services.

Future research would be including whole students in North Cyprus That will enhance the results and make it more accurate.In other way, a more accurate responsendents could be attained when it would incorporate different students from different city in North Cyprus. In addition, different bank has different services and this may result in increase the accurety of the results.However, Customer's satisfaction can be improved further by increasing the technology level in banks, followed by creative innovation in products and services being offered by the banks.

## RECOMMENDATION

The most important recommendations of this study were to encourage banks to establish loyalty with customers and to create technological awareness and safety criteria, and to create a free number to help customers, and to receive their complaints. Also, it concluded with a recommendation to observe clients' reactions.Moreover, it also recommended the IŞ Bank management of Cyprus should enhance their promotion in order to increase students' awareness

regarding using the electronic banking services and their benefits.

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