Szent István University

Doctoral School of Economic and Regional Sciences

The Readiness of the Palestinian Banking Industry to Fintech Era: Measuring the Fintech Ecosystem in Palestine

Ph.D. Thesis

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1. INTRODUCTION

1.1. Background

Economic development affected by banks as these are the main financial institutions in any country. For many year banks have been the main responsible party that work in collaboration with customers and organizations for most financial transactions (KAUSHAL & GHOSH, 2016). The Palestinian banks are part of this global impact on the developing economy. Banks take part in foreign and local exchange trading and also process payments for all their customers. Moreover, banks have a positive impact on economic growth (BONGINI et al., 2017, p.335).

It is important to investigate the most affected global trends on a bank's performance, since in this century, they face a digital transformation era in financial services. Financial Technology (Fintech) evolution is the main financial evolution in the world. Fintech is integrating Finance, Technology Management and Innovation Management together into one coherent form. (LEONG, 2018). This researcher investigated the significant role of technology and innovation in enhancing the digital transformation in the banking services. My findings show that AI plays a significant role in predicting the customers experience (AI can explain 26.4% of Customers Experience) (ABU DAQAR & SMOUDY, 2019a). A recent study has been published for the researcher which indicates a novel result about the role of Fintech in predicting the spread of COVID-19 (the novel coronavirus), this study revealed that the consumer's Fintech behavior before and after COVID-19, and Fintech perception after the outbreak of COVID-19 might predict 52.5% of the variance in COVID-19 spread (ABU DAQAR et al., 2021)

What is important in a research work is to link the concept with facts. Fintech is the new leader within digital transformation, the main driving force of Fintech development. There is vast use and wide penetration of digital gadgets among companies. They employ these gadgets in tracking the financial management which began in earnest in the 1970s and 1980s (BANKS, 2001). Whereas, the country financial inclusion can be improved and have the great impact through digital innovations. Data analysis and visualization are examples that provide accurate information for a better organization and monetization of underdeveloped communities (GABOR & BROOKS, 2016).

This transformation in the digital structure of global financial services, and the new financial innovations in this industry, leads to create new role players in the market to handle and lead this transformation such as the main role player

nowadays which is Fintech. Fintech is considered the main provider of such services to the financial institutions. Moreover, banks are forced to follow this fast pace of Fintech services. Hence, Fintech plays a dual role as a support party that lead this financial development and on the same time it considered a main rival for banks (DAPP 2017, ROMĀNOVA & KUDINSKA 2016, BENSAR & RODRÍGUEZ 2018).

When talking about bank performance, it is crucial to highlight the current ecosystem of Fintech in the targeted country. This is an indicator for banks about how the main players affect the digital transformation process in their financial services. At the same time, it supports and lead their strategies, plans, and efforts to move forward within this transformation. Fintech ecosystem refers to the most dominant players involved in this context, with the dynamics and functions managed by these players (LEE & SHIN, 2018).

Another important player forcing this financial transformation is the significant role played by Millennials and Gen Z in adopting the new Fintech services globally. These generations are the early adopters of Fintech services worldwide. Hence banks need to tailor their services and products to be aligned with these generations needs and expectations (ABU DAQAR et al. 2020, BRODMANN et al. 2018). These generations have the highest level of technology acceptance among all consumers and customers. They are the engine driving the Fintech innovation in the market. Hence Fintech targets this group through different digital tools such as smartphones, computers, etc. (BERRAIES et al. 2017, TAN & LEBY LAU 2016).

1.2. Statement of Problem

Banks continually look to increase revenues and reduce costs in their services, products, procedures, processes and operations. However, what if banks are threatened by the new comer's effect on the overall financial services industry globally? They need to tailor all their strategies, plans and work actions to be at least in a survival mode. Their goal then is to not cease any of their basic functions and leave it to other rivals in the market. What if banks failed to follow the fast-paced digital transformation of financial services? How banks will recognize the driving factor which considered the main pressure and stress to move forward and adopt the cutting-edge technologies to enhance their systems, services and processes. This adaption is essential to match the customers' and consumer needs? What is the readiness level of banks to face this digital transformation leading to inevitable threat or opportunity?

These questions then lead to asking how aware are banks to Fintech requirements in the market? Do banks have a clear understanding about the dominant players who lead this transformation in the market? Is there an investigation and intention to adopt Fintech services among Millennials and Gen Z in the market? What opinion do these generations have about Fintech? What is the current Palestinian Fintech ecosystem status?

All these questions need explanation and it needs a thorough investigation about each of these issues. This thesis tries to discover and explore the readiness level of Banks in Palestine to Fintech revolution in the financial industry. This thesis will reveal the readiness level of banks to respond, develop and implement the technological requirements of Fintech's global services; services necessary to meet their customers' needs and demands.

1.3. Research Objective

The main objective of this thesis is to investigate the adaptive readiness of the Palestinian Banks to Fintech requirements and evolution. It shall measure the Fintech ecosystem in Palestine and explore the Fintech adoption intentions of Millennials and Gen Z.

1.4. Research Questions

Q1: "What is the readiness level of the Palestinian Banks for the Fintech requirements in the financial digital transformation?"

Q2: What is the attractiveness level of the Palestinian market for Fintech services?

Q3: What is the usage level of Fintech Services among Millennials and Gen Z in Palestine?

Q4: What is the intention level of Fintech Services usage among Millennials and Gen Z in Palestine?

Q5: What is the Government Support level for Fintech Services in Palestine from the Millennials and Gen Z point of view?

1.5. Research Hypotheses

H1: Government Support plays a significant role in supporting the Fintech in Palestine (From the Millennials and Gen Z point of view)?

H2: There is a significant relationship in exogenous and endogenous variables in the Fintech Adoption Intention for Millennials and Gen Z in Palestine

H3: There is a significant impact of E-TAM dimensions on Millennials/Gen Z Attitude toward Fintech services in Palestine
H4: There is a significant impact of E-TAM dimensions on Perceived Usefulness of Fintech Adoption in Palestine from Millennials/Gen Z point of view

H5: There is a significant impact of E-TAM dimensions on Millennials/Gen Z Intention for Fintech services adoption in Palestine

1.6. Significance of Study

This thesis will provide novel evidence about the banks' status in Palestine for Fintech adoption level and it also creates a new understanding for Banks Readiness Measure for Fintech Adoption and will measure and explore the Fintech adoption intention by Millennials and Gen Z in the Palestinian market. It describes a local comparison between these two generations and also a global comparison. Thus, providing a realistic indicator for banks regarding the recent intention behavior of these generations; and also, for banks to be alerted to the innovative requirements needed by these generations.

In addition, this thesis reveals the types of Fintech services that are needed, ideal, and most favorable with consumers/customers' needs in the market. It then leads banks toward the best strategies for developing their services to meet the current and the future needs. The novelty of this research work is that is provides the first Fintech overview about the needs, status and direction for both banks and Fintech companies.

2. MATERIALS AND METHODOLOGY

This chapter describes each topic involved in the construction of this research work for the PhD thesis. The topics covered are; Section One: Data collection methods, Section Two: Study instrument (questionnaire design), Section Three: Conceptual model, Section Four: Study population, Section Five: Sample size, and Section Six: Methods of data analysis.

2.1. Data collection

2.1.1. Primary Data

The study used two main sources of data, the first source is the interviews with the pioneer banks in Palestine whom involved in digitizing their financial

services and following the international trend to adopt the Fintech services. These banks are upgrading their systems to meet their customers' needs.

The second source is a questionnaire. The questionnaires in this study are in the e-form method. The researcher targeted two populations in Palestine. These two populations reflect the two generations that meet the objectives of the study, Millennials and Gen Z. They are the main motivators for banks to adopt the Fintech technology within the industry since they have high intention to adopt the Fintech services. Services that are provided by companies and other financial institutions worldwide, beyond the banking industry. The study used two questionnaires, with very similar items with few differences in social profile. one questionnaire targeted the Millennials and the other targeted Gen Z. The major source was the Arab American University, one of the biggest universities. The purpose of using this university is it has the solid base of technology where many students are aware of these services, and there is a huge cultural mix. Hence, this university was the best option to target Gen Z in order to get responses about their intention to adopt the new Fintech services within the market.

2.1.2. Secondary Data

The researcher used other data sources to provide evidence. Studies, experts, official reports and government bodies involved and qualified to provide the recorded data about this topic. The researcher obtains this source of data from journals, textbooks, periodicals, and reports.

2.2. Thesis Instrument

2.2.1. Questionnaire Design

The two study survey questionnaires are in three sections: Section one is the demographic variable; it is consisted of 10-11 items where the Millennials one consists of 11 items. Section two covers the consumers' financial behavior and Fintech perception. The section consists of 22-23 items. Millennials are covered with 23 items, while the last section is about the respondents' intention to adopt Fintech (according to the Extended Technology Acceptance Model E-TAM). This section consists of nine sub-sections, Perceived Usefulness (consists of 4 items), Perceived Ease of Use (3 items), Trust (2 items), Brand Image (3 items), Perceived Risk (3 items), Government support (3 items), User Innovativeness (2 items), Attitude (3 items), Intention (2 items). The two questionnaires have the same nine sub-sections with the same items for each sub-section. These questionnaires are constructed on the basis

of five Likert scales in the third section: Consumers Financial Behavior and Fintech Perception, using the Extended Technology Acceptance Model.

Table 1. Thesis questionnaire scale

Variables	Scales	Sources
Perceived Usefulness	Fintech could meet my financial services needs	(LOCKETT & LITTLER, 1997) and (HUH et al., 2009)
	"Fintech services could save my time"	
	"Fintech services could improve services efficiency"	
	On General, Fintech services are suitable to me	
Perceived Ease of Use	Fintech services are easy to use	(CHENG et al., 2007) and (ZANDHESSA MI & GERANMAYE H, 2014)
	"I think the operation interface of Fintech services interface is user friendly and easy to understand"	
	Fintech services equipment's are easy to obtain (mobiles, APPs, Internet Connection, et al.)	
Trust	"Fintech services keep my personal information safe"	(YEE-LOONG et al., 2010) and (SANCHEZ-TORRES et al., 2018)
	"Fintech services are trustable"	
Brand Image	"The bank could provide good services and products"	(HA, 2004) and (RUPARELIA et al., 2010)
	I prefer services provided by familiar brands	
	The bank has a good reputation	
Perceived Risk	Money could be stolen when using Fintech Services	(MARAKARK ANDY et al., 2017) and (GRABNER-KRÄUTER & FAULLANT, 2008)
	"I think that my personal privacy will be under threat to be disclosed"	
	On general, Fintech services are risky	
	In my opinion the government encourage and supports the usage of Fintech services	

Governme nt Support	I think the government provided the solid base from regulations and legislation to facilitate the work of Fintech services	(MARAKARK ANDY et al., 2017)
	I believe that government provided the required infrastructure that push the Fintech services in the market	
User Innovative ness	When there is a new product, I am among the early birds who would like to try and use it	ZHANG et al. (2018)
	"In my opinion using Fintech services is a very good idea"	
Attitude	It is a pleasant experience when using Fintech services	(GRABNER-KRÄUTER & FAULLANT, 2008)
	"I am interested in using Fintech services"	
	"If I used Fintech services before I will continue using it"	
Intention	I am looking for using fintech services very soon	(MARAKARK ANDY et al., 2017) and (PATEL & PATEL, 2018)
	"I am willing to recommend Fintech services to friends"	

Source: Author's own construction based on Literature

2.2.2. Banks Readiness Measure

The researcher in this study gathers the main Fintech functions that banks could adopt and develop their products and services accordingly, while it handles the most recent technology, regulation requirements to introduce Fintech services that make them able to compete with other Fintech rivals in the market, this model has been developed based on the most recent cutting-edge technologies and Fintech requirements and functions that have a direct impact on banks main systems and products. The model has been developed based on the 6th main Fintech core technologies as the following: Remittances & Payments, Big Data & Artificial Intelligence, Digital Banking, Lending & Alternative Financing, Security & Risk Management, and Blockchain Services, these six categories are the main Fintech categories worldwide that a bank could compare its competencies and capacities according to these global Fintech requirements in order to be capable to follow the fast pace in the digital financial services.

Table 2. Fintech Core technologies

Fintech Core Technology Categories					
1. **Remittances & Payment**	2. **Big Data & Artificial Intelligence**	3. **Digital Banking**	4. **Lending & Alternative Financing**	5. **Security & Risk Management**	6. **Blockchain Services**
1.1 Omnichannel payment	2.1 Automated support	3.1 Personal Financial Management	4.1 Lending Marketplaces	5.1 PCI & DSS	6.1 Process Automation
1.2 Money Transfer	2.2 Predictive Analytics	3.2 Onboarding New Customers	4.2 Loan Comparison Solutions	5.2 GDPR	6.2 P2P transactions
1.3 API Development	2.3 Financial Data Management	3.3 Digitalization of Banking	4.3 Supply Chain Financing	5.3 Security Testing	6.3 Supply Chain Management
1.4 Third-party integration	2.4 Data-driven management decision	3.4 Fraud and Security	4.4 Invoice-based Financing	5.4 Fraud Detection	6.4 Asset Tokenization
1.5. Mobile Payments	2.5 Fraud Detection	3.5 Banking Data Aggregation APIs	4.5 Fund Management	5.5 Advanced Risk System	6.5 Data Access Decentralization
1.6 Online payment	2.6 AI for Back Office	3.6 Anti-money Laundering			6.6 Digital Identity

(Row header spanning left side: Fintech Technology Sub-Categories)

Source: Author's own work

The researcher builds this model to compare the compliance and the adoption for each category by these banks. The author used the mean analysis for each category and then used the mean for all categories to measure the overall compliance of this model, it is the first model that is created to measure the Banks Fintech adoption.

2.2.3. Validity of Questionnaire

This study uses confirmatory factor analysis in order to test the study model; convergent validity. Validity of instrument means the degree that the study model is a good fit with survey data, that's including convergent validity test. "The convergent validity reflects the correlation degree of multiple indicators for a variable, which is measured by the average variance extracted AVE of the latent variable, the CR, and the loading of corresponding measurable variables" (BAGOZZI et al. 1991). The AVE of the sample must be larger than 0.5, while the loadings of the study measurable variables must be greater than 0.7 (RUVIO et al. 2008, CHIN 1998). All the evidences in table 6 support the convergent validity of all constructs. As shown in table 6, the AVE was greater than 0.5 for all variables and CR is larger than 0.7, so the validity is granted in this model.

2.2.4. Normality Test

The researcher used different methods to examine if the study data closely to be normally distributed, Skewness and Kurtosis were used, the researcher extracted the Z-Value per each Skewness and Kurtosis if the values between these cutoff points (-1.96,1.96), the researcher used this measure for both questionnaire the Millennials and Gen Z. All the Z-Values for both Skewness and Kurtosis were between -1.96 and 1.96, it means that the study data are little skewed and kurtotic for all the study variables, but it doesn't differ significantly from normality. The researcher can assume that the data are approximately normally distributed (GEORGE & MALLERY, 2010; TROCHIM & DONNELY, 2006; FIELD, 2009; GRAVETTER & WALLNAU, 2014).

The second method the researcher used is Kolmogorov-Smirnov and Shapiro-Wilk to test normality based on the p-value for each variable in the study, the results supported if the p-value is greater than 0.05 then we could assume that the data is approximately normally distributed. The results revealed that both tests support the normality assumption that the study data is approximately normally distributed, all of the sig. are above 0.05 which indicates that the data are approximately normally distributed (STEINSKOG et al. 2007, SHAPIRO et al. 1968).

2.2.5. Collinearity Test

The researcher used the collinearity test through SPSS using Linear Regression test to assess the Multicollinearity effect among the study

variables. So, the collinearity test used for both questionnaires, the researcher depends on the VIF cutoff which is 5, all VIF below 5 will be accepted according to RINGLE et al. (2015) and it means that Multicollinearity doesn't exist between the tested variables in the study, Multicollinearity means that there are two or more variables in the study model are highly linear related, it is a problematic issue in assessing the relationships between the variables.

The results show that all the VIF for both questionnaires were below 5 then the researcher concluded that there is no multicollinearity among the study variables.

2.2.6. Reliability of Questionnaire

Reliability of the instruments was tested by using Cronbach's Alpha coefficient and the result was found to be more than 0.7 for all study dimensions.

2.3. Conceptual Model

The overall objective of this thesis is to find out the readiness of the Palestinian Banks for the Fintech technology in the banking industry; through studying the Palestinian financial ecosystem, to discover the financial situation if it encourages the adoption of Fintech or it is a threat for the banks. Moreover, the study shows two main players in the ecosystem which are the main drivers to adopt Fintech in the market; these two players are Millennials and the Generation Z, these two generations have a significant impact on the Fintech adoption intention, it assists banks to discover their adoption intention and to tailor and digitize the current banks services to meet their needs to compete the current Fintech competitors in the market; as these companies targeted Millennials and Gen Z in the first line because of the high unbanked ratio in Palestine which is around 70% of the population.

The researcher used the Structural Equation Modeling (SEM) by using AMOS software version 24 to examine the impact of E-TAM dimensions on these three internal variables from the same E-TAM model which are the most influenced dimensions in the E-TAM that affect Millennials and Gen Z Fintech adoption. These three variables are (Attitude, Perceived Usefulness, and Intention) considered as the dependent variables of the study; while the rest of the variables were independent variables. SEM is used in this study because it is one of the most efficient statistical methods which deals with the relationship between the study variables by using the covariance matrix, multiple regression, and path analysis tests (POOLTHONG & MANDHACHITARA, 2009). The researcher designed the conceptual models

of this study for each generation based on these three determinants (Attitude, Perceived Usefulness, and Intention), in each model the researcher examined the impact of all of the E-TAM dimensions on these three variables and how could interpret the variance per each variable. So, this study used the SEM to reveal the relationship between the study variables through the covariance matrix. Moreover, the researcher used the SEM to measure the influence of independent variables on the study dependent variables. SEM estimates' calculations were used to predict the econometric equation for the study variables. The researcher designed the study conceptual models illustrated in the following two figures 1 & 2; the results in these two figures are based on the SEM analysis results (Path Analysis, regression weights, and the squared multiple correlations).
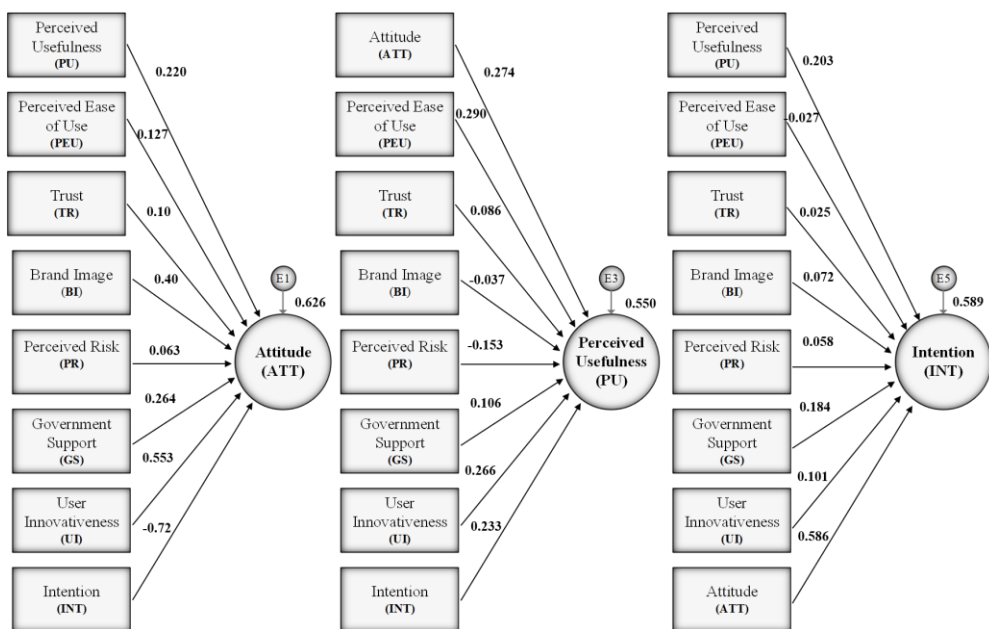

Figure 1. SEM Conceptual Model 1-2 (Millennials)

Source: Author's own construction (Derived from E-TAM)

Note: Numbers (0.626, 0.550, 0.589) obtained from the squared multiple correlations tables, while other number extracted from the Standardized Regression Weights tables (Appendix 2)

Figure 2. SEM Conceptual Model 2-2 (Gen Z)

Source: Author's own construction (Derived from E-TAM)

Note: Numbers (0.626, 0.550, 0.589) obtained from the squared multiple correlations tables, while other number extracted from the Standardized Regression Weights tables (Appendix 2)
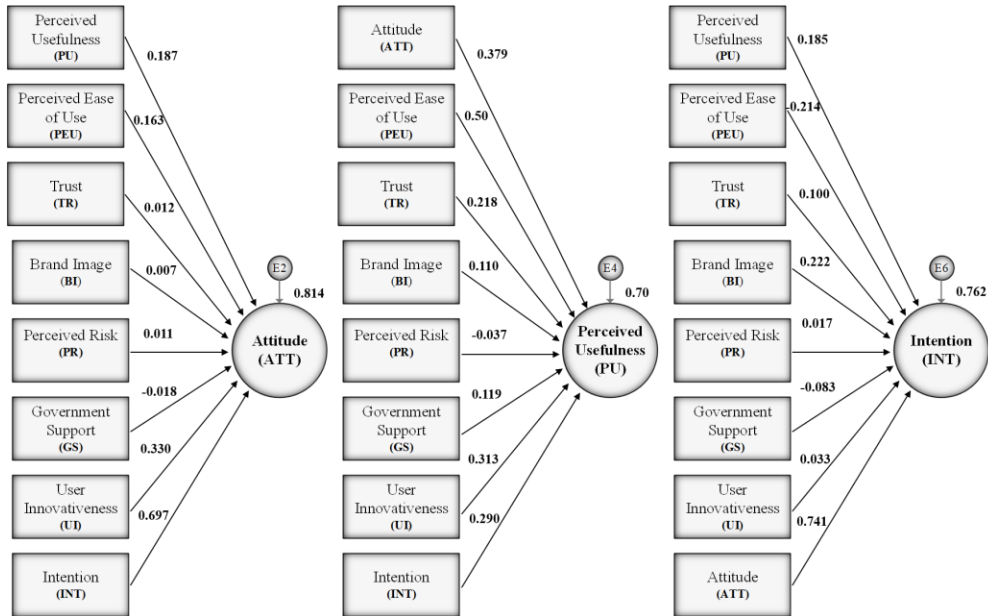
2.4. Population of thesis

The population of thesis is divided into two main segments, Millennials are the generation of people born between 1981 and 1996 (DIMOCK, 2019) and Gen Z is the generation of people born 1997 onward (DIMOCK, 2019) in West Bank Area in Palestine. The questionnaires were distributed randomly via social media channels to achieve an acceptable sample size; it was in the form of e-Form questionnaire targeted people whom in the mentioned age. Moreover, for the Gen Z population, the researcher chose a very famous and popular location to distribute his e-Form questionnaire which is the Arab American University-Palestine (AAUP) with 12,000 students' population. It consists of a complete mix of students of the targeted age, the university has an optimal distribution of students according to the geographic location to reflect the Palestinian market opinion toward Fintech adoption intention. AAUP has been selected for the dedicated Gen Z as it expresses exactly the required age group (18-24 years), location diversity, different cultures, and different financial behavior. While for Millennials the author targeted the bank users in West-Bank, Palestine (age group 25-40, 1.1217 Million, 22% of Population). The researcher targeted this age group through social media

channels, the main social media channels used to distribute the survey are FB and LinkedIn, and the researcher collaborated with a specialist in social media to target this group, the researcher aimed to target the employees within this age segment as the majority have a bank account and Fintech experience. Appendix 1 (Palestine Population) shows the demographic distribution and the number of the population per each group and location.

The researcher also used the technical interview technique (this type of interview used with IT specialists because the interview is related mostly to IT categories) to explore the pioneer Palestinian banks in Fintech adoption and their readiness for the Fintech cutting-edge technologies to adopt and digitize the latest financial technologies in the banking industry, so the researcher holds interviews with three pioneer banks in this domain (Fintech Industry), actually the banks' top management insisted to keep their names hidden due to the sensitive data that they provide for this research. The researcher selected one Islamic bank which is the highest reputed bank in Palestine and it has a significant impact on the digital financial industry in Palestine. Whereas the author selected two Palestinian commercial banks within the same criteria as the Islamic Bank. There are 14 registered banks in Palestine according to the Palestinian Monetary Authority, local and foreign, there are 7 foreign banks and 7 local banks. There are three Islamic Banks from the local banks, Palestine has no international foreign Islamic Banks. The questionnaires were limited for the Palestinian Banks because it is hard to make a sensitive interview about this topic with an international bank, it needs high coordination and negotiation with their top management to accept, and also all their headquarters are out of Palestine it needs high logistician efforts. Banks in Palestine employ around 8,587.

2.5.   Sample size

The researcher used the stratified sampling to insure the equitable presentation for the study targeted population for the two questionnaires. Thesis sample size identified according to KREJCIE & MORGAN (1970) equation.

Minimum Sample size = 372 observations, and the maximum minimum number will be 385 samples for any population size.

A number of 600 questionnaires distributed to respondents for both generations. A number of 589 respondents out of the total 600 have been retrieved, 29 questionnaires have been discarded due to the corruption in data, so 560 questionnaires were adopted for the analysis for Gen Z population. The response rate is 98%. While for Millennials, 600 questionnaires distributed via social media, 568 have been retrieved, 18 have been discarded due to the

corruption in data, so the response rate is 95%, so 550 questionnaires were adopted.

2.6. Method of data analysis

The researcher used SPSS version 25 (the statistical package for social science) and AMOS version 24 (Analysis of Moment Structures) for data analysis. The researcher checked that study data for entry errors and ensured the stability and the accuracy of data. The study used the parametric tests to assess the relationship between the study variables. The parametric tests were used for this purpose as the following: Frequency test used to describe the demographic variable, mean and standard deviation used to for the research questions, one sample T test to test part of hypotheses, where AMOS used to find the correlations among the study variables to examine the relationship between variables, Path Analysis and squared multiple correlations were used to examine the significant impact of the E-TAM model on Millennials and Gen Z Attitude/Perceived Usefulness/Intention of Fintech Adoption.

3. RESULTS AND DISCUSSIONS

3.1. Analysis of Participants Social Profile

- The results show that around 40% of Gen Z is Unbanked, it is a positive indicator for both banks and Fintech companies to target this segment. Around 45% of Gen Z don't use e-Banking service;
- It means that there are no awareness programs from the bank side to encourage and motivate the usage of e-banking services.
- This segment has no knowledge or information about the advantage in using this kind of e-service.
- The bank advantage in cost reduction when this segment directed to use this e-channel.
- Around 12% of Gen Z use e-banking once a month; it has many indicators for banks, Did the banks meet their needs and wants through e-banking? Did they provide the exact service to use via e-banking? Is it easy to use? Is it an effective tool to use (time saving, 24h availability, user friendly... Etc.)?
- Around 36% of the Millennials don't use e-banking service, it is a negative indicator for both banks and Fintech companies to target this segment;
- It means that percentage is a burden for banks and Fintech companies, it indicates that this segment has no interest to use e-channels, it is a

bad indicator for Fintech companies, if this percentage will not be treated and to direct them to use the e-services in the future they will lose the financial benefits generated from their usage.

- On the other side, it will be hard then to adopt the new technologies associated with their financial services.
- It is a chance for Fintech in the optimistic side, that they can target this segment to provide them with easy and simple financial solutions that meet their needs.
- It deserves to evaluate the effectiveness and the efficiency of the provided e-services in order to achieve routes that will guide the banks about the suitable services and channels that will fit the customer's needs.

- Around 61% of Millennials use e-banking either once/twice/ +3 a month; it indicates that the majority of users use the e-banking services, it has two different indicators:

- The positive indicator for Banks, this base could promote banks e-services in the future, and they are the winning marketing tool to encourage others to use these services, the word-of-mouth marketing strategy is still the most effective marketing strategy in Palestine and WW.
- The negative indicator, these types of users already used and have a feedback about the usage of e-services, they have the knowledge, feedback, suggestions and their own experience; so, Fintech companies can attract them (positive indicator for Fintech) to use their services as it is brand new services in the financial services that depends on the availability of technology and the ability to use this technology. So, Fintech can provide them with the exact products and services that meet their needs.
- Another negative indicator, this segment (61%) could be underbanked in the near future, they will quit using banks services into the Fintech services due to many reasons, ease of use, 24h service availability, feasibility, profitability if it is related to wealth management module that provided by Fintech companies.

For Fintech companies, it is the chance to exploit this segment:
- Data shows that all the sample own smartphone by (100%).
- It is one of the main indicators that Fintech relies on to penetrate the market and spread their services.
- The other Indicator is the percentage of unbanked/Underbanked Gen Z and Millennials, the recent financial inclusion studies shows that more than 50% of the Palestinians are unbanked.

- The important note is around 25% of Gen Z and 19% for Millennials transfer money to pay their tuition fees, it means it is a great opportunity to push them to pay these fees via e-Wallet.

For Banks, there is a good indicator, actually it is a critical one which it needs higher negotiation skills and capital to enhance and empower their appearance in the Higher Education Organizations:

- Data shows that the majority of Gen Z have a bank account in the bank that has an appearance in the same university (43% the dominance of one bank compared with others) so it is a major role that the bank can play to increase its market share among this generation and promote its services.
- Banks have opportunity to adopt the Fintech role to invest or establish this kind of services under the umbrella of Fintech services under the control of the bank (partnership, cooperation, investment, acquisition business model with Fintech companies).

For Fintech, it is also a good indicator, actually this point also enhances the idea behind fintech companies to target the students in the Universities, if they will establish contacts with the top management of these institutes to open e-Wallet account for the unbanked segment as the first priority, then opening new virtual accounts for students who already have a bank account.

3.2. Analysis of Participant Financial Behavior & Fintech Perception

Table 3. Results Comparison between Millennials & Gen Z (1-3)

Item	Millennials	Gen Z	Notes
Most Important of Financial Service	Reliability/Trust 45%	Ease of Use 46%	Let your services easy to use to be adopted by Gen Z
	Ease of Use 40%	Reliability/Trust 35%	While invest in your trust image with Millennials and let your services easy to use
Financial Services	Branch Visit 50%	Branch Visit 62%	Gen Z: Lower Trust indicated higher visits to the bank it self

Access (Method)	Mobile Banking 29%	Mobile Banking 17%	Millennials: Higher Trust, leads to higher mobile banking usage
Using Banks Services rather than Fintech	65% Agree	59% Agree	Higher Trust with Millennials leads to higher use of bank services
			While lower trust leads to higher intention to use Fintech services
Payment Method (Frequently)	Cash 58%	Cash 80%	Lower # of Banks Account holders (Gen Z) leads to use cash intensively
	Debit/Credit Card 30%	Debit/Credit Card 18%	Affording Millennials Debit/Credit cards leads to higher card payments
			Fintech Advantage (Chance): to use e-wallet service to migrate cash users into e-payment through e-wallet
Fintech Awareness	48%	38%	Good Indicator for Fintech industry to start in the Palestinian market
Using Fintech services	9% Active Users	6% Active Users	Using Online Payment Services
	46% User	25% Users	
			e-Payment service is needed by these two segments in the market

Source: ABU DAQAR et al. (2020)

Table 4. Results Comparison between Millennials & Gen Z (2-3)

Item	Millennials	Gen Z	Notes
Prefer Using e-Wallet to access work Payroll	88%	NA	Opportunity for Fintech to provide e-Wallet service for companies and organizations
			Opportunity for companies and organization to reduce costs and getting rid of indemnity
Using e-Wallet to pay tuition fees	84% want it	84% want it	It shows that e-Wallet service is needed in the market, it promotes Fintech services
Prefer Real-time Service	87% Agree	70% Agree	The majority need real-time financial services, it means Banks specifically need to highly invest in technology to achieve this milestone in its financial services
			Fintech opportunity to provide solutions and services to grant banks this kind of service
Need an Instant Money Transfer	50% faced this situation	47% faced this situation	This means the market in need for an instant money transfer service

(Previous situation)			
What you think about Fintech?	48% Complementary	45% Complementary	Majority said Fintech companies is playing complementary role
	19% Competitor	32% Competitor	We conclude that Gen Z is the dominant to adopt Fintech services in market
what service let you quit your bank to use Fintech services?	Better Service, Ease of Use & Speed of Service	Better Service, Ease of Use & Speed of Service	We conclude that both Generations agreed that Fintech services could guarantee these three categories of Fintech features compared with banks services

Source: ABU DAQAR et al. (2020)

Table 5. Results Comparison between Millennials & Gen Z (3-3)

Item	Millennials	Gen Z	Notes
Fintech Services Security through Mobile	63% Secured	56% Secured	It means that security issue perception toward fintech services is granted, no problem with security issues
Financial Trust (Banks)	86% trust banks	82% trust banks	It means that Banks have a solid base and could promote Fintech services with the cooperation with Fintech companies, and they could promote new financial

			services competing fintech companies
Benefit of Mobile Banking Services	61% Time Saving	41% Time Saving	Millennials looking for time saving in accessing financial services
	25% 24h Access	30% 24h Access	Gen Z looking for the service availability to be 24h
Fintech Services Cheaper than Banks Services	62% think so	66% think so	It shows that all generations have a positive perception that Fintech services is cheaper
			It means that they have the intention to adopt the Fintech services
Promotion is a driver for e-Banking usage?	90% agreed	90% agreed	We conclude that promotion is a key factor to promote and encourage the usage of e-Banking services
Financial Services want to use at Mobile	63% Payment Services	58% Payment Services	Banks and Fintech must target the payment category
	26% Wealth Management	24% Wealth Management	It a surprising result, banks said customers have no interest in these services, but in fact it is the contrary
	6% Robot Advisor	14% Robot Advisor	Customers want personal financial consultant to manage their financial issues

Which e-Wallet service wants to use?	e-Bills Payment	Purchasing via e-commerce	Millennials prefer the four categories with the same priority
	Purchasing via e-commerce	Deposit and Withdraw	
	Deposit and Withdraw	e-Bills Payment	Gen Z prefer these four categories (first category has the main priority)
	Money Transfer	Internet & Mobile top-up	
Type of Bills you want to pay at Mobile?	Mobile Phone	Mobile Phone	Millennials prefer the four categories; mobile phone bills are the highest among them
	Mobile Charge top-up	Mobile Charge top-up	
	Goods for Work	Tuition Fees	Gen Z prefer these four categories mobile phone bills is the highest among them
	Others	Others	
Daily Mobile Apps Usage	The majority of Millennials 53.3% using mobile apps on daily basis between 70-100%	71.2% of Gen Z using mobile Apps daily, between 70-100%, The notable issue is 21.7% of them using apps on this	The results indicate that Gen Z have more app experience and usage than Millennials, it helps banks and Fintech to target them toward using mobile app services

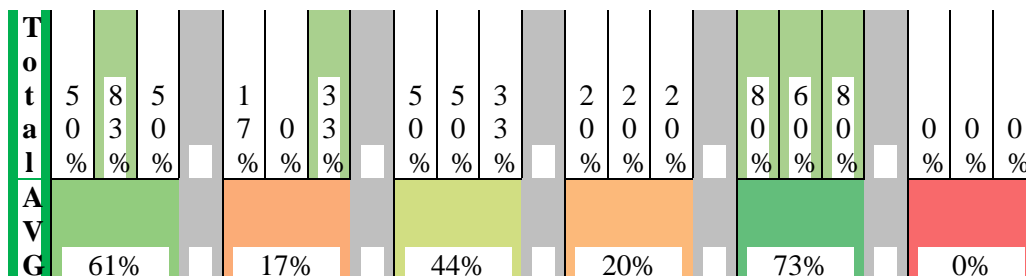|			
		percentage 90-100%	

3.3. Thesis Questions

Q1: To answer the thesis question: "What is the readiness level of the Palestinian Banks for the Fintech requirements in the financial digital transformation?"

Table 6. Banks Compliance with Fintech Core technologies

Sub-Category	1. Remittances & Payment			Sub-Category	2. Big Data & AI			Sub-Category	3. Digital Banking			Sub-Category	4. Lending & Alternative Financing			Sub-Category	5. Security & Risk Management			Sub-Category	6. Blockchain Services		
	Bank A	Bank B	Bank C		Bank A	Bank B	Bank C		Bank A	Bank B	Bank C		Bank A	Bank B	Bank C		Bank A	Bank B	Bank C		Bank A	Bank B	Bank C
1.1	x	x	x	2.1	x	x	√	3.1	x	x	x	4.1	x	x	x	5.1	√	√	√	6.1	x	x	x
1.2	√	√	√	2.2	x	x	x	3.2	x	x	x	4.2	x	x	x	5.2	x	√	√	6.2	x	x	x
1.3	x	√	x	2.3	x	x	√	3.3	√	√	x	4.3	x	x	x	5.3	√	√	√	6.3	x	x	x
1.4	x	√	√	2.4	x	x	x	3.4	√	√	√	4.4	√	√	√	5.4	√	x	√	6.4	x	x	x
1.5	√	√	x	2.5	√	x	x	3.5	x	x	x	4.5	x	x	x	5.5	√	x	x	6.5	x	x	x
1.6	√	√	√	2.6	x	x	x	3.6	√	√	√									6.6	x	x	x

Total																							
50%	83%	50%		17%	0%	33%		50%	50%	33%		20%	20%	20%		80%	60%	80%		0%	0%	0%
AVG																							
61%				17%				44%				20%				73%				0%			

Source: Author's own construction

The Answer for the question: We concludes that the banks readiness for the Fintech era is around 35%, which is classified into a low level of readiness. (Mainly two categories out of six are applicable to meet the Fintech requirements in the banking financial technology).

Q2: What is the Attractiveness level of the Palestinian Market for Fintech Services?

This question has been answered through the interviews with the banks top management, there is a consensus that the Palestinian market is attractive for Fintech services; there is something which is the main pillar of Fintech to target a market which is the unbanked ratio in the county, in Palestine the unbanked ratio is 70%, which means that this segment has no bank account, they are the target segment for these companies to acquire them in new Fintech services. We can conclude that level of attractiveness is High due to the high percentage of the unbanked in Palestine. Furthermore, there are feasibility studies shows the feasibility of these Fintech services in the Palestinian market.

Q3: What is the usage level of Fintech Services among Millennials and Gen Z in Palestine?

The results reflect the two generations usage behavior for Fintech services, it was clear that the usage is low according to the low scores that both of generations scores regarding the usage behavior (the only method I used for e-payment, I use it frequently), Millennials is 19% while Gen Z is 11.4%.

Q4: What is the intention level of Fintech Services usage among Millennials and Gen Z in Palestine?

The results from the questionnaires show that the Intention level of Fintech services usage is high among the two generations. (Millennials, Gen Z), (M=4.0732., SD=0.5596), (M=4.1297., SD=0.8252) respectively.

Q5: What is the Government Support level for Fintech Services in Palestine from the Millennials and Gen Z point of view?

The results show that the Government Support level of Fintech services in Palestine is medium among the two generations. (Millennials, Gen Z), (M=3.2163., SD=0.8678), (M=3.1651, SD=0.9797) respectively. The results were expected from the respondents; actually, Fintech services needs the Government Support to provide the suitable infrastructure in terms of the technical part as blockchain infrastructure. Furthermore, the Political situation plays a significant role in these kinds of services in Palestine; so the government intervention is needed to provide the solid base for the international companies to invest in this technology in the country, banks and Fintech companies will be the direct parties whom involved in this intervention to gain benefits and to secure their business to meet the cutting-edge technology in the financial services.

3.4. Thesis Hypotheses

Hypothesis 1
H1: Government Support plays a significant role in supporting the Fintech in Palestine (From the Millennials and Gen Z point of view)?

One sample t-test was used to examine the first hypothesis (Government Support doesn't play a significant role in supporting the Fintech in Palestine), with a 95% level confidence, the results show that Government Support from the Millennials and Gen Z point of view (mean=3.2163, SD=.8678 (mean=3.1651, SD=.9797) respectively wasn't significantly different from 3.67 (cut point), (t= 53.064, p=0.000) (t= 47.035, p=0.000) respectively. The results support the null hypothesis which means that Government support doesn't play a significant role in supporting the Fintech in Palestine (From the Millennials and Gen Z point of view.

Hypothesis 2
H2: There is a significant relationship in exogenous and endogenous variables in the Fintech Adoption Intention for Millennials and Gen Z in Palestine

Table 7. Millennials Correlation coefficients among ETAM variables

Path Direction			Estimate
PEU	<-->	PU	.580
PU	<-->	TRU	.569
PU	<-->	BI	.412
PU	<-->	PR	.067
PU	<-->	GS	.226
PU	<-->	UI	.466
PU	<-->	ATT	.620
PU	<-->	INT	.588
PEU	<-->	TRU	.584
PEU	<-->	BI	.460
PEU	<-->	PR	.044
PEU	<-->	GS	.324
PEU	<-->	UI	.369
PEU	<-->	ATT	.501
PEU	<-->	INT	.454
TRU	<-->	BI	.419
TRU	<-->	PR	.092
TRU	<-->	GS	.431
TRU	<-->	UI	.411
TRU	<-->	ATT	.473
TRU	<-->	INT	.478
BI	<-->	PR	-.134
BI	<-->	GS	.282
BI	<-->	UI	.252
BI	<-->	ATT	.360
BI	<-->	INT	.372
PR	<-->	UI	-.013
PR	<-->	GS	-.339
PR	<-->	ATT	.107
PR	<-->	INT	.053
GS	<-->	UI	.325
GS	<-->	ATT	.240
GS	<-->	INT	.347
UI	<-->	ATT	.570
UI	<-->	INT	.519
ATT	<-->	INT	.722

Source: Author's own work based on AMOS results

In Palestine, the Millennials Intention toward the Fintech adoption is highly correlated with their Attitude (0.722), Millennials Attitude also highly correlated with the Perceived Usefulness (0.620) of the Fintech services. The top three variables that are highly correlated with Millennials Intention of Fintech adoption are (Perceived Usefulness, User Innovativeness & Attitude), it means that these variables highly predicted the Millennials Intention to adopt Fintech services.

Table 8. Gen Z Correlation coefficients among ETAM variables

Path Direction			Estimate
PEU	<-->	PU	.709
PU	<-->	TRU	.600
PU	<-->	BI	.619
PU	<-->	PR	.222
PU	<-->	GS	.061
PU	<-->	UI	.673
PU	<-->	ATT	.769
PU	<-->	INT	.728
PEU	<-->	TRU	.652
PEU	<-->	BI	.582
PEU	<-->	PR	.154
PEU	<-->	GS	.046
PEU	<-->	UI	.641
PEU	<-->	ATT	.667
PEU	<-->	INT	.555
TRU	<-->	BI	.429
TRU	<-->	PR	.409
TRU	<-->	GS	.155
TRU	<-->	UI	.580
TRU	<-->	ATT	.597
TRU	<-->	INT	.552
BI	<-->	PR	-.115
BI	<-->	GS	.291
BI	<-->	UI	.549
BI	<-->	ATT	.610
BI	<-->	INT	.620
PR	<-->	GS	-.289
PR	<-->	UI	.157

PR	<-->	ATT	.202
PR	<-->	INT	.195
GS	<-->	UI	.214
GS	<-->	ATT	.081
GS	<-->	INT	.054
UI	<-->	ATT	.758
UI	<-->	INT	.663
ATT	<-->	INT	.849

Source: Author's own work based on AMOS results

In Palestine, Gen Z Intention toward the Fintech adoption is highly correlated with their Attitude (0.849) which is the highest relation between variables, Gen Z Attitude also highly correlated with the Perceived Usefulness (0.769) of the Fintech services, the results also typically similar with Millennials view. The top three variables that are highly correlated with Gen Z Intention of Fintech adoption are (Perceived Usefulness, User Innovativeness & Attitude (0.728, 0.663, 0.849 respectively), it means that these variables highly predicted the Gen Z Intention to adopt Fintech services.

Hypothesis 3
H3: There is a significant impact of TAM dimensions on Millennials/Gen Z Attitude toward Fintech services in Palestine

Table 9. Squared Multiple Correlations (Millennials) H3

Variable	Estimate
ATT	0.626

Source: Author's own work based on AMOS results

By using SEM; the squared multiple correlations show a significant relationship exists between E-TAM variables in this model, in other words it Indicates that the combination of E-TAM variables (INT, PR, BI, GS, UI, PEU, TRU, PU) significantly predict the Millennials Attitude in Fintech Services Adoption, also as $R^2 = 0.626$ which means that the independents variables could explain 62.6% from the variation in dependent variable "Millennials Attitude".

Table 10. Squared Multiple Correlations (Gen Z) H3

Variable	Estimate
ATT	0.814

Source: Author's own work based on AMOS results

By using SEM; the squared multiple correlations show a significant relationship exists between E-TAM variables in this model, in other words it Indicates that the combination of E-TAM variables (INT, PR, BI, GS, UI, PEU, TRU, PU) significantly predict the Gen Z Attitude in Fintech Services Adoption, also R^2= 0.814 which means that the independents variables could explain 81.4% from the variation in the dependent variable "Gen Z Attitude".

Millennials Attitude = 0.194 PU+ 0.182 UI + 0.413 INT

The interpretations of the significant independent variables:

- There is a direct impact between **Millennials Attitude (ATT)** and (PU, UI & INT), an increasing in the following predictors coefficients values (PU, UI & INT) by (1.94, 1.82 & 4.13) units respectively it would increase **Millennials Attitude** by 10 units.
- But there is no impact for these predictor variables (PR, BI, GS, PEU, TRU) on **Millennials Attitude.**

Gen Z Attitude = 0.170 PU+ 0.140 PEU+ 0.228 UI + 0.486 INT

The interpretations of the significant independent variables:

- There is a direct impact between **Gen Z Attitude (ATT)** and (PU, PEU, UI & INT), an increasing in the following predictors coefficients values (PU, PEU, UI & INT) by (1.70, 1.40, 2.28 & 4.86) units respectively it might increase **Gen Z Attitude** by 10 units.
- But there is no impact for these predictor variables (PR, BI, GS & TRU) on **Gen Z Attitude.**

Hypothesis 4
H4: There is a significant impact of TAM dimensions on Perceived Usefulness of Fintech Adoption in Palestine from Millennials/Gen Z point of view

Table 11. Squared Multiple Correlations (Millennials) H4

Variable	Estimate
PU	0.550

Source: Author's own work based on AMOS results

By using SEM; the squared multiple correlations show a significant relationship exists between E-TAM variables in this model, in other words, it Indicates that the combination of E-TAM variables (INT, PR, BI, GS, UI, PEU, TRU, ATT) significantly predict the Perceived Usefulness of Millennials in adopting Fintech Services, also R^2= 0.550 which means that the independents variables can be explain 55% from the variation in the dependent variable "Perceived Usefulness".

Table 12. Squared Multiple Correlations (Gen Z) H4

Variable	Estimate
PU	0.70

Source: Author's own work based on AMOS results

By using SEM; the squared multiple correlations show a significant relationship exists between E-TAM variables in this model, in other words it Indicates that the combination of E-TAM variables (INT, PR, BI, GS, UI, PEU, TRU, ATT) significantly predict the Perceived Usefulness of Gen Z in adopting Fintech Services, also R^2= 0.700 which means the independents variables can be explain 70% from the variation in the dependent variable "Perceived Usefulness".

Millennials Perceived Usefulness = 0.197 PEU + 0.142 TRU - 0.068 GS + 0.203 ATT + 0.161 INT

The interpretations of the significant independent variables:

- There is a direct impact between **Perceived Usefulness (PU)** and (PEU, TRU, GS, ATT & INT), an increasing/decreasing in the following predictors coefficients values (PEU, TRU, GS, ATT & INT) by (**1.97, 1.42, -0.68, 2.03 & 1.61**) units respectively it would increase **Perceived Usefulness** by 10 units.
- But there is no impact for these predictor variables (INT, PR, BI, UI) on **Perceived Usefulness.**

Gen Z Perceived Usefulness = 0.255 PEU + 0.144 BI + 0.180 ATT + 0.158 INT

The interpretations of the significant independent variables:

- There is a direct impact between **Perceived Usefulness (PU)** and (PEU, BI, ATT & INT), an increasing in the following predictors

coefficients values (PEU, BI, ATT & INT) by (2.55, 1.44, 1.80 & 1.58) units respectively it might increase **Perceived Usefulness** by 10 units.

- But there is no impact for these predictor variables (PR, GS, UI, TRU) on **Perceived Usefulness.**

Hypothesis 5
H5: There is a significant impact of TAM dimensions on Millennials/Gen Z Intention for Fintech services adoption in Palestine

The results show by using SEM; the squared multiple correlations show that a significant relationship exists between E-TAM variables in this model, in other words it Indicates that the combination of E-TAM variables (ATT, PR, BI, GS, UI, PEU, TRU, PU) significantly predict the Millennials Intention in adopting Fintech Services, also R^2= 0.589 which means the independents variables could explain 58.9% from the variation in the dependent variable "Intention".

While for Gen Z, the squared multiple correlations show that a significant relationship exists between E-TAM variables in this model, in other words it Indicates that the combination of E-TAM variables (ATT, PR, BI, GS, UI, PEU, TRU, PU) significantly predict the Gen Z Intention in adopting Fintech Services, also R^2= 0.762 which means the independents variables could explain 76.2% from the variation in the dependent variable "Intention".

Millennials Intention = 0.206 PU + 0.102 GS + 0.554 ATT

Gen Z Intention = 0.213 PU - 0.234 PEU + 0.239 BI + 0.693ATT

3.5.   Research Questions Discussion

Q1: "What is the readiness level of the Palestinian Banks for the Fintech requirements in the financial digital transformation?"
The researcher founds that the Palestinian banks readiness for Fintech requirements in terms of technological base is around 35%, which is classified into a low level of readiness. The Palestinian banks met the requirements of these two categories with above than 60% for all of them (Remittances & Payment, and Security & Risk Management). As a researcher I found that this is a weakness point in this industry as banks dominating the financial industry in Palestine; other categories (digital banking, big data and AI, and blockchain technology) are important in the financial industry; regardless others may consider that they achieve a very good ranking in Payments and Remittances as this category formulated about 75% of Fintech adoption worldwide (EY,2019).

This percentage changed in a rapid way since 2015 compared with 2019, the adoption was 18% (2015), 50% (2017), and 75% (2019); these percentages reflect how trends changed in this industry, It means that financial institution needs to adopt other categories related to this industry to meet the requirements and the main functions of the digital transformation in the financial industry as consumers are the main key drivers for this transformation, as well-knowns consumer behavior changed periodically so banks and other financial institutions need plans to face this transformation in order to meet their consumers' needs and expectations and to be aligned with the market requirements and trends. It considered as opportunity and threat in the same time. The researcher would like to point out one of his recent results about the role of Top Management in enhancing the quality of service and meeting the new customers expectation; this result contributed with how the banks must be ready to listen to the market needs and have a keen hearing and also having the best intelligence tools to stay in the competition in the market and meet the customers' needs, top management commitment in the total quality management system (TQM) is the most influencing factor that affects the organization competency and capacity for innovation (ABU DAQAR & CONSTANTINOVITS, 2020).

Q2: What is the Attractiveness level of the Palestinian Market for Fintech Services?

Fortunately, the researcher reached the top management whom involved in the banks strategic planning process to obtain the real image about the Palestinian market attractiveness for Fintech services from the banks point of view; there is a consensus among all interviewees that the Palestinian market is attractive for Fintech services. The main driver for this attractiveness is the high percentage of the unbanked people in Palestine which is around 70% as mentioned earlier in the Literature Review section; it supports the banks arguments to target this group with the digital financial services based on the available technology in the country related to financial services, it helps the financial institution to increase their market share in the market and on the other side they will improve their financial services into a competitive Fintech services that meet the consumer's needs (PMA, 2020). The researcher found that there is a high attractiveness level in the market for the Fintech services adoption by these financial institutions due to the high percentage of the unbanked people. The researcher stresses that there is a pure opportunity banks need to exploit, as fast as they exploit this opportunity it will stay an opportunity; unless it will be a critical threat that other Fintech companies will exploit to target the unbanked people with their innovative and easy to use services.

Q3: What is the usage level of Fintech Services among Millennials and Gen Z in Palestine?

The results reflect the two generations usage behavior for Fintech services, it was clear that the usage is low according to the low scores that both of generations scores regarding the usage behavior (the only method I used for e-payment, I use it frequently), Millennials is 19% while Gen Z is 11.4%. This result hide two indicators for the financial industry in Palestine, the first one is the unavailability of Fintech services provided to the customers in the market, as the researcher mentioned earlier there was a low level of awareness among consumers in this regard, the other indicator the new Fintech comers (Fintech companies) have a clear image and solid base to establish their services because the rivalry in this context still have no place because there are no experts or established businesses who provide such services in this domain. ENVISIONIT (2018) stresses in their recent study that around 73% of respondents are more receptive to use Fintech services from a well-knows companies which is a real threat to banks need to overcome and to find the best solutions to decrease the competition in this situation (ENVISIONIT, 2018).

Q4: What is the intention level of Fintech Services usage among Millennials and Gen Z in Palestine?

As the researcher mentioned earlier awareness is different than intention toward Fintech services from his point of view, as it needs a proof; the target group awareness in this study scored a low level while the intention level to adopt Fintech services scored a high level of intention; both generations showed high interest in Fintech services according to these scores; (Millennials, Gen Z), (M=4.0732., SD=0.5596), (M=4.1297., SD=0.8252) respectively. This result supports the fact that 73% of the target group have the intention to use Fintech services while 68% of them see that the way that we access money will be changed soon in the next five years (ENVISIONIT, 2018).The findings are aligned with the researcher work through investigating the intention of Millennials and Gen Z for Fintech adoption, high Intention level recoded for both of them, while Millennials have the highest intention (ABU DAQAR et al., 2020). These results support that there is an opportunity for Fintech companies to exploit these trends and tendencies toward adopting Fintech services by Millennials and Gen Z, moreover, banks need to pay efforts to either compete Fintech companies or to cooperate with them to develop and enhance their digital services to meet the consumers' needs.

Q5: What is the Government Support level for Fintech Services in Palestine from the Millennials and Gen Z point of view?

This study revealed that the Government Support level of Fintech services in Palestine is medium from the two generations point of view. (Millennials, Gen Z), (M=3.2163., SD=0.8678), (M=3.1651, SD=0.9797) respectively. According to the researcher background about the Fintech ecosystem in Palestine the results was aligned with the actual situation about the Fintech support by the Government. Actually, Fintech services heavily rely on the Government Support to provide the accurate infrastructure in terms of the technical part as blockchain infrastructure to facilitate the mission for the service providers to push their innovative services through the digital channels. Furthermore, the Political situation plays a significant role in providing such services in this regard; the researcher analyzed the situation; it needs a government intervention to establish the solid base for international companies to direct their investment in this domain, banks and Fintech companies will be the direct beneficiaries whom involved in this intervention to gain benefits and to secure their business to meet the cutting-edge technology in their financial services. Government support is the key pillar in Fintech adoption and one of the main reasons that affects the consumers intention to adopt Fintech services (YEE-LOONG et al. 2010, KIWANUKA 2015, MARAKARKANDY et al. 2017).

3.6.   Research Hypotheses Discussion

H1: Government Support plays a significant role in supporting the Fintech in Palestine (From the Millennials and Gen Z point of view)?

The results show that Government support doesn't play a significant role in supporting Fintech in Palestine from the Millennials and Gen Z point of view, both generations agreed that Government has no role in motivating or creating the suitable infrastructure that support Fintech to provide these kinds of services to the market. The researcher result matches others researchers results; SÁNCHEZ -TORRES et al. (2018) found that Government Support has no significant impact on supporting the adoption of online financial services, these results compared with the degree level that government intervene to support Fintech, in this study, the results show a low level of government intervention. Other studies show that the higher government intervention will lead to higher Fintech support and adoption (YEE-LOONG et al. 2010, KIWANUKA 2015, MARAKARKANDY et al. 2017).

H2: There is a significant relationship in exogenous and endogenous variables in the Fintech Adoption Intention for Millennials and Gen Z in Palestine

All study variables are positively correlated except between (Perceived Risk & Government Support), it means that Millennials & Gen Z see that the higher Government Support the lower Perceived Risk. The researcher results revealed that Millennials Intention toward Fintech adoption is highly correlated with Attitude, and also Millennials & Gen Z Attitude are highly correlated with Perceived Usefulness of Fintech services which is the same as Gen Z. The researcher found these three variables (Perceived Usefulness, User Innovativeness & Attitude) were the most highly correlated with Millennials & Gen Z Fintech Adoption Intention, it shows that these variables highly predicted their Fintech Adoption Intention. The most interesting results in this study is Perceived Risk has no place or effect on Millennials Fintech Adoption Intention; it means that Perceived Risk has no role on their adoption intention which is a strength point and opportunity for banks and Fintech companies to exploit it to provide services in this domain without paying critical attention toward the perceived risk toward these services. Perceived Usefulness is highly correlated with all study variables except with Perceived Risk, it reflects a truth and proof for banks and Fintech companies to tress delivering the benefits to consumers and instill these benefits in their minds. Furthermore, Millennials & Gen Z see that Government Support didn't play any important role to facilitate the mission for Fintech companies to provide their services in the Palestinian market, the researcher concludes that Government Support didn't create the required Fintech ecosystem to push these services in the market, this result matches SÁNCHEZ-TORRES et al. (2018) results that Government support has no impact on Fintech adoption. The study results coincide with significant studies in this context, where perceived risk has no effect on consumers attitude toward Fintech adoption (HU et al. 2019, JIN et al. 2019, MUÑOZ-LEIVA et al. 2017). Moreover, CHUANG et al. (2016) found that perceived usefulness is a key variable that positively affect the consumers attitude in Fintech adoption.

H3: There is a significant impact of TAM dimensions on Millennials/Gen Z Attitude toward Fintech services in Palestine

This study shows there is a significant impact of E-TAM dimensions on both Millennials and Gen Z Attitude toward Fintech Adoption, (Millennials R^2= 0.626; Gen Z R^2= 0.814) which means the independents variables could explain 62.6%, 81.4% from the variation in the dependent variable "Millennials and Gen Z Attitude" respectively. Gen Z predictors highly

predicts the generations attitude rather than Millennials, it is a highly noted result complied with the most recent results by Forbes that Gen Z is the highest adopter for Fintech services and surpasses Millennials (FUSCALDO, 2020).

The researcher econometric model equation shows the following:

Millennials Attitude = 0.194 PU+ 0.182 UI + 0.413 INT

Gen Z Attitude = 0.170 PU+ 0.140 PEU+ 0.228 UI + 0.486 INT

There is a direct impact between Millennials Attitude (ATT) and (PU, UI & INT), an increasing in the following predictors coefficients values (PU, UI & INT) by (1.94, 1.82 & 4.13) units respectively it might increase Millennials Attitude by 10 units, while there is a direct impact between Gen Z Attitude (ATT) and (PU, PEU, UI & INT), an increasing in the following predictors coefficients values (PU, PEU, UI & INT) by (1.70, 1.40, 2.28 & 4.86) units respectively it would increase Gen Z Attitude by 10 units. The results show that Perceived Ease of Use plays a significant role in Gen Z attitude, it means that this generations needs an easy and simple way to access these services compared with Millennials, this fact needs full consideration from banks and Fintech companies to promote their products on this basis. All the mentioned variables in this hypothesis that predict Millennials and Gen Z attitude in Fintech Adoption aligned with these researchers results (CHUANG et al. 2016, JIN et al. 2019, HU et al. 2019, MARAKARKANDY et al. 2017).

H4: There is a significant impact of TAM dimensions on Perceived Usefulness of Fintech Adoption in Palestine from Millennials/Gen Z point of view

The researcher found that there is a significant impact of TAM variables on Perceived Usefulness of Fintech Adoption from both Millennials and Gen Z point of view, (Millennials R^2= 0.550; Gen Z R^2= 0.700) which means the independents variables could explain 55%,70% from the variation in the dependent variable "Perceived Usefulness" respectively.

The researcher econometric model equation shows the following:

Perceived Usefulness (Millennials) = 0 .197 PEU + 0.142 TRU - 0.068 GS + 0.203 ATT + 0.161 INT

Perceived Usefulness (Gen Z) = 0.255 PEU + 0.144 BI + 0.180 ATT + 0.158 INT

There is a direct impact between Perceived Usefulness (PU) and (PEU, TRU, GS, ATT & INT) from Millennials point of view, an increasing/decreasing in

the following predictors coefficients values (PEU, TRU, GS, ATT & INT) by (1.97, 1.42, -0.68, 2.03 & 1.61) units respectively it might increase Perceived Usefulness by 10 units, while there is a direct impact between Perceived Usefulness (PU) and (PEU, BI, ATT & INT) from Gen Z point of view, an increasing in the following predictors coefficients values (PEU, BI, ATT & INT) by (2.55, 1.44, 1.80 & 1.58) units respectively it would increase Perceived Usefulness by 10 units. The common variable between these two generations that predict Perceived Usefulness is Perceived Ease of Use, it is a key result shows that PEU is a main pillar that help banks and Fintech companies to make their services simple, user friendly and easy to use to attract consumers to adopt their Fintech services. These results match the findings of these research's that PEU highly predict and affect Fintech adoption (RIQUELME & RIOS, 2010; SUM CHAU & NGAI, 2010; ABBAD, 2013).

H5: There is a significant impact of TAM dimensions on Millennials/Gen Z Intention for Fintech services adoption in Palestine

The study shows that TAM variables significantly have an impact on consumers Intention in adopting Fintech Services from Millennials and Gen Z point of view, (Millennials R^2= 0.589; Gen Z R^2= 0.762) which means the independents variables could explain 58.9%, 76.2% from the variation in the dependent variable "Intention" respectively.

The researcher econometric model equation shows the following:

Intention (Millennials) = 0.206 PU + 0.102 GS + 0.554 ATT

Intention (Gen Z) = 0.213 PU - 0.234 PEU + 0.239 BI + 0.693ATT

There is a direct impact between Millennials Intention in Fintech services adoption (INT) and (PU, GS & ATT), an increasing in the following predictors coefficients values (PU, GS & ATT) by (2.06, 1.02, 5.54) units respectively it might increase Intention by 10 units, while there is a direct impact between Gen Z Intention in Fintech services adoption (INT) and (PU, PEU, BI & ATT), an increasing/decreasing in the following predictors coefficients values (PU, PEU, BI & ATT) by (2.13, -2.34, 2.39, 6.93) units respectively it would increase Intention by 10 units. The researcher found that (Perceived Usefulness and Attitude) are the common variables among both generations that have the highest prediction impact on consumers intention toward Fintech adoption these results matched and aligned with these researchers results

(LIFEN ZHAO et al. 2010, SHAIKH & KARJALUOTO 2015, p.129, ABOELMAGED & GEBBA 2013) which stressed that Attitude is highly associated and predict consumers intention toward Fintech adoption, moreover, consumers Perceived Usefulness is also highly associated with consumers Intention toward Fintech adoption (CHANG et al. 2016, CARLIN et al. 2017).

3.7. Novel Results

a) Global Fintech Context Contribution

This study explored and measured the Fintech ecosystem in the banking context among the two main Fintech adopters which are Millennials and Gen Z, it combines for the first time in a study a comparison between these two generations in the Palestinian context and how it is different than the global context.

b) Banks Readiness Model for Fintech Adoption

This study has measured for the first time the banks readiness to Fintech core technologies as the main threshold for Fintech adoption services (in the Palestinian Context). This Readiness Model is a unique indicator and a tool for the banks to measure and analyze their compliance with the Fintech core technologies in the world. The study measured the Palestinian Banks readiness which is around 35% to the Fintech core technologies. This tool could be adopted in global context.

c) Market Attractiveness of Fintech

The researcher revealed an indicator about the market attractiveness for Fintech services; the explored drivers that are linked with higher market attractiveness are the percentage of the unbanked segments in the country (higher unbanked ratio leads to higher Fintech adoption intention), and the penetration of the digital gadgets especially the smartphone ownership in the country, these two drivers are the main triggers that will give a clear indicator for any market attractiveness for Fintech adoption. The researcher concluded that lower financial inclusion leads to higher Fintech adoption especially in these two segments (Millennials and Gen Z); these segments are the highest among other segments in the market for Fintech adoption.

d) Fintech Ecosystem

Through the conceptual model the researcher aimed to explore the role of the Palestinian Government in Fintech Adoption from the Millennials and Gen Z point of view, both of them show that the Government has no significant

impact to support Fintech infrastructure, this finding reflects a new imperial result that will be added to Fintech context. Millennials and Gen Z trust in Government plays an important role for Fintech adoption, the government has a technological responsibility to provide the solid base for Banks and Fintech companies to promote and invent new Fintech services in the market such as blockchain structure that facilitates huge sector of Banks financial services such as money transfer and digital identity.

The study manifests that the Fintech adoption intention among these generations is extremely affected by their Attitude, which shows a significant scientific contribution that attitude is the main indicator that reflects the generations adoption intention of Fintech. The second issue which proves that Millennials and Gen Z attitude toward Fintech adoption highly associated with Perceived Usefulness; these novel results linked for the first time a real comparison between these generations and disclose that the two generations have the same interest in this regard.

The researcher contributed in finding the most significant elements that affects Millennials and Gen Z attitude based on the E-TAM model; Millennials attitude highly predicted by Perceived Usefulness, User Innovativeness, and their Intention. While for Gen Z; Perceived Usefulness, Perceived Ease of Use, User Innovativeness, and Intention. The researcher found that both generations in Palestine have three common dimensions that affect their attitude of Fintech adoption, whereas Gen Z required the ease of use to highly adopt Fintech services. Furthermore, User Innovativeness dimension has been highlighted as a common indicator and driver which is directly associated with Attitude.

The researcher used a detailed approach which shows a novel investigation method that reveals the interrelated and inner connections among the E-TAM model for the first time in a study that combine the most Fintech adopters' segments in the society. Millennials perceived usefulness highly associated with Perceived Ease of Use, Trust, Government Support, Attitude, and Intention. While for Gen Z; Perceived Ease of Use, Brand Image, Attitude, and Intention.

These results are clearly clarified the main difference between Millennials and Gen Z perceived usefulness; Millennials affected by the Government Support intervention while Gen Z affected by the Band Image; this point shows why Gen Z is the highest Fintech adopters in the International context. These results are highly contributing and adding new novel results associated with the E-TAM model.

The researcher was able to provide a clear strategy for Fintech adoption especially for the main segments in this context which are Millennials and Gen Z; clear indicators and drivers have been connected and associated in the Fintech context to reveal the roadmap for the Fintech adoption requirements either through the generations adoption intention and the technological requirements in the market that are required to digitize the financial services to meet the customers' needs and expectations that are aligned with the global Fintech context.

e) The Highest adopting segments

The results show for the first time in a study that Millennials are the highest adopters for Fintech services than Gen Z (in the Palestinian context), the researcher studied both generations Financial behavior and Fintech perception; both of these generation have low awareness level of Fintech; these findings revealed the deficiency from the banks level to move toward the digital transformation infrastructure in their financial services. This fact is one of the significant indicators that will cause both generations to quit the traditional financial services into new digital and real-time financial services.

4. CONCLUSION AND RECOMMENDATIONS

4.1. Conclusion

In this section the researcher measured the Palestinian banks readiness for Fintech requirements. The pioneer banks scored 35% of their readiness for the international requirements to Fintech transformation and adoption. This result indicates a low level of readiness according to the measurement tool adopted in this study. Noteworthy is that banks scored their best performance in the Payment and Remittances category, which is considered the dominating category for Fintech worldwide functions. The majority of Fintech companies are focused on payment and remittances solutions for consumers. Hence, banks in Palestine had near a 60% readiness score in this domain. The researcher found that the Palestinian market is considered an attractive market for Fintech services industry. If they can attract financial institutions to invest in this domain, it will yield profitable results, based on the feasibility studies for earnings.

The study reveals that government support has no significant impact on Millennials and Gen Z intentions to adopt Fintech within Palestine. This is a critical finding it is a critical finding since it is aligned with the questions and hypotheses in this study. Once the government's support is high, banks and other Fintech companies will have a safe and well-equipped infrastructure; a

major requirement to move toward digitization in financial services. Then promotion of these services to the targeted group in the market, Millennials and Gen Z, moreover, it is aligned with lower Fintech usage.

The researcher has clarified the correlation between the study variables used in E-TAM model; the results show that there is a positive correlation between all variables except between perceived risk & government support. Millennials intention toward Fintech adoption is highly correlated with their attitude. Millennials & Gen Z attitudes are highly correlated with the perceived usefulness of Fintech services.

Perceived Usefulness, User Innovativeness & Attitude are the most highly correlated variables for Millennials & Gen Z inclinations to adopt. It means that these three variables highly predict the Fintech Adoption Intention, while Perceived Risk and Government Support have no role related to Millennials and Gen Z intentions to adopt Fintech. Perceived Usefulness is highly correlated with all study variables except for Perceived Risk. The study explains that there is a significant impact of E-TAM variables on both Millennials and Gen Z Attitude toward Fintech Adoption. These Gen Z predictors are highly predictive of that generations attitude, and more so than Millennials. In additions it shows a direct correlation between Millennials Attitude (ATT) and (PU, UI & INT). There is also a direct relationship between Gen Z Attitude (ATT) and (PU, PEU, UI & INT). Moreover, all mentioned variables (between brackets) are strong predictors for the Millennials and Gen Z attitude toward Fintech adoption.

E-TAM variables significantly have an impact on Government Support role in Fintech Adoption from the Millennials and Gen Z perspective. The results indicate a positive and strong linear relationship between Government Support and the predictors for Millennials; while for Gen Z it shows positive but a moderately linear trend. Also, there is a direct impact between Government Support Role (GS) and (PU, TRU, PR & INT)- Millennials view.

For Gen Z there is a direct impact between Government Support Role (GS) and (PEU, TRU, BI PR & UI). These results explain the significant differences between the two generations- the Millennial result indicate Perceived Usefulness, Trust, Perceived Risk and Intention as the best predictors of Government support. In contrast, Gen Z results indicate Perceived Ease of Use, Trust, Brand Image, Perceived Risk, and User Innovativeness as strong predictors.

E-TAM variables have a significant influence on Perceived Risk for Fintech Adoption. This result also indicates differences between the two generations

response to Perceived Risk for Fintech Adoption, with Gen Z having the highest perception.

The study explains that E-TAM variables have a significant impact on Perceived Usefulness of Fintech Adoption, according to both Millennials and Gen Z. In addition, Millennials see that these variables PEU, TRU, GS, ATT & INT predict Perceived Usefulness (PU), while for Gen Z PEU, TRU, GS, ATT & INT are the best predictors. Hence, PEU is generally a key pillar in consumers Fintech adoption.

It was clarified also that E-TAM variables have a significant impact on consumer intentions when adopting Fintech Services. Millennials believe also that these variables (PU, GS & ATT) highly predict positive intention in Fintech services adoption, while for Gen Z, these variables (PU, PEU, BI & ATT) have the highest impact. Also, this research work found that Perceived Usefulness and Attitude have the highest prediction impact on consumers intention toward Fintech adoption.

4.2. Recommendations

This is the first study in Palestine which investigates the Fintech ecosystem in the financial industry involving banks and Fintech companies. The research findings include indicators and valuable recommendations for the financial institutions in Palestine. These recommendations allow business owners in this domain to design their strategies and plans to meet the market trends, for both a local and international context. The researcher provides banks with the most cutting-edge readiness criteria required for banks to adopt Fintech transformations for delivery of their financial services. Moreover, it provides a threshold structure to compare themselves to this structure, and hence the ability to measure their readiness for this evolution.

Given the high unbanked ratio in Palestine; the researcher recommends banks in the first order to exploit this massive segment by attracting the unbanked segment to open virtual accounts. This approach is viable since the majority have smartphones. This tool is the key driver for banks to offer the Fintech services to potential consumers. The Fintech strategy is based on two pillars. The first is the unbanked people and the smartphone penetration ratio. Since the ratios are high, the Fintech adoption intention will be high among this segment. Hence it is recommended that banks promote the e-wallet concept to Millennials and Gen Z; especially since these generations are the early adopters for Fintech services worldwide. The study shows that Millennials

have the highest intention to adopt Fintech services; and their use of Fintech services is higher than Gen Z.

The researcher also recommends banks and Fintech companies use e-wallet to facilitate the financial services for both generations. For example, Millennials indicate highly a preference for using e-wallet for payroll functions, along with payments transactions. They prefer the ease of 24-hour availability and access to real-time services. Moreover, the researcher recommends that banks should enhance their real-time systems to meet the consumers' needs. He found that this critical function, adopted by banks, can to meet the threshold requirements for real-time Fintech services.

It is recommended that banks spread the awareness to both their consumers and prospective customers about e-banking services. according to the study results, the e-services awareness (Fintech services) scored a low level of awareness. Therefore, it is the banks' best interest to design special awareness strategies and programs that target current consumers. Strategies that encourage them to use these services through a variety of channels. Branches should take the initiatives to train customers to use e-services.

4.3.   Research Limitations and Future Research Directions

The researchers aim in this study is to reveal the readiness of banks for Fintech adoption. The researcher was obliged to focus the study on banks sole based in Palestine. This choice is made because other banks operating in Palestine have a centralized management based outside the Palestinian Territories. For these banks, it was not possible to access the key managers for approval to interview the targeted people and departments. Furthermore, the local Fintech infrastructure is still in its first stage in Palestine. Hence, there is significant potential to enhance the banks capabilities and competences to take advantage of the Fintech digital transformation.

The researcher is looking to apply and measure the readiness model by other researchers in this context to reveal and discover the efficiency of this model on this particular context of the banks. Moreover, future research work is proposed; ideally with a thorough comparison between these two banks segments. A comprehensive view of local and international banks, operating in the same country, can reveal how these bank segments may successfully adopt, implement, and utilize Fintech services. Furthermore, the researcher was limited to include one country for this study which is Palestine; the sample size was exclusive for the Palestinian respondents.

APPENDIX 1: LIST OF PUBLICATIONS

1. **The participation and presentation in the following conferences:**

- Conference Title: "Business and Management Sciences: New Challenges in Theory and Practice 25th Anniversary of the Doctoral School of Management and Business Administration, Szent István University", I have participated in this conference with presentation and Abstract under this title "**THE IMPACT OF CUSTOMERS RELATIONSHIP MANAGEMENT ON CUSTOMERS SATISFACTION IN THE BANKING INDUSTRY OPERATED IN PALESTINE- NORTH WEST BANK**". Date of Conference: 25th-26th of October 2018.

- Conference Title: "6th Winter Conference of Economics PhD students and Researchers", Participating in a Full Paper under this title "**THE IMPACT OF TRAINING ON EMPLOYEE PERFORMANCE**", Godollo, Hungary, Szent Istvan University, Date of Conference: 28th of February 2020.

2. **Publications: (12 Publications)**

   1. ABU DAQAR, M., CONSTANTINOVITS, M., ARQAWI, S. & DARAGMEH, A. (2021): The role of Fintech in predicting the spread of COVID-19. *Banks and Bank Systems*, 16(1), pp.1-16. (**SCOPUS Q3**).
   2. ABU DAQAR, M., ARQAWI, S. & ABU KARSH, S. (2020): Fintech in the eyes of Millennials and Generation Z (the financial behavior and Fintech perception). *Banks and Bank Systems*, 15(3), pp.20-28. (**SCOPUS Q3**).
   3. ABU DAQAR, M. & CONSTANTINOVITS, M. (2020): The role of total quality management in enhancing the quality of private healthcare services. *Problems and Perspectives in Management*, 18(2), pp.64-78. (**SCOPUS Q3**).
   4. ABU DAQAR, M. (2020). The Impact of Corporate Governance on Working Capital Management Efficiency (WCME) in the Manufacturing Firms (Version 1). Journal of Accounting Research, Business and Finance Management, 1(1), 4–12.
   5. ABU DAQAR, M. & SMOUDY, A. (2019): The role of artificial intelligence on enhancing customer experience. *International Review of Management and Marketing*, 9(4), pp.22-31.

6. ABU DAQAR, M.A., & SMOUDY, A.K. (2019). Employee Engagement Level: The Transform from Employee to Partner. *Mathematical Models and Methods in Applied Sciences, 13*, 115.

7. ABU DAQAR, M. A., & SMOUDY, A. K. (2019). The Impact Of Consumer Buying Behavior On Customer Relationship Management In The Banking Sector. *International Review of Management and Marketing, 9*(4), 39-46.

8. ABU DAQAR, M. A., SMOUDY, A. K., & CONSTANTINOVITS, M. (2019). Employer Branding: Creating a Sustainable Recruitment Plan in Large Corporates. *Modern Applied Science, 13*(8), 9.

9. ABUALROB, M. M., ASAD, N. A., & ABU DAQAR, M. A. (2019). Attitudes Toward and Implications of the Computer-Based Exams at Arab American University of Palestine. *Journal of Education and Learning, 8*(1), 196.

10. IRIQAT, R. A., & ABU DAQAR, M. A. (2018). The Mediating Role of Customers' Satisfaction on the Effect of CRM on Long-Term Customers Loyalty in the Banking Sector in the Palestinian Territory. *Asian Social Science, 14*(8), 76.

11. IRIQAT, R. A., & ABU DAQAR, M. A. (2017). The Role of Customer Relationship Management on Enhancing the Customers' Satisfaction in the Banks in Palestine. *Modern Applied Science, 11*(12), 84.

12. IRIQAT, R. A., & ABU DAQAR, M. A. (2017). The Impact of Customer Relationship Management on Long-term Customers' Loyalty in the Palestinian Banking Industry. *International Business Research, 10*(11), 139.