

Intentions to use fintech in the Jordanian banking industry**Ayman Abdalmajeed Alsmadi^{a*}, Amjed Alfityani^b, Loai Naser Alhwamdeh^c, Amer Moh'd Al_hazimeh^d and Jassim Ahmad Al-Gasawneh^e**^a*Al Zaytoonah University of Jordan, Jordan*^b*Faculty of business, Department of Accounting, Applied Science Private University, Amman, Jordan*^c*Middle East University of Jordan, Assistant Prof Amman, Jordan*^d*Al_bayt university, Amman, 80082, Jordan*^e*Department of Marketing, Faculty of Business, Applied Science Private University, Jordan***CHRONICLE****ABSTRACT***Article history:*

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This paper aims to explore the intentions to use FinTech and its important role in the banking industry in Jordan. Accordingly, this study analyzes the nature of the relationship between intention to use financial technology and each of: Processing Unit (PU) perceived usefulness, social impact (SI), customer's trust (TRU) and perceived ease of use (PEU). Previous research related to financial technology is still under development and which is still being researched by providing an alternative approach to understanding how different business levels have stimulated the emergence of innovation-focused fintech companies, and what are the motives of success. Therefore, the main contribution of this research is to fill the gap in previous research related to financial technology that is still under development and which is still being researched by providing an alternative approach to understanding how different business levels have stimulated the emergence of innovation-focused fintech companies, and what are the motives of success. Results show a positive relation between intention to use financial technology and Processing Unit (PU), social impact (SI), customer's trust (TRU) and perceived ease of use (PEU). The main contribution of this research is to fill the gap in previous research related to financial technology that is still under development and which is still being researched by providing an alternative approach to understanding how different business levels have stimulated the emergence of innovation-focused fintech companies, and what are the motives of success.

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1. Introduction

Recently, there has been a major increase in the investment of financial technology around the world, which led to the emergence of a new term (Fintech), which refers to innovations that seek to compete with traditional financial methods when providing financial services to clients (Arner et al., 2015; Kim et al., 2016; Al-Omouh et al. 2020; Yaseen & Qirem, 2018). Fintech is an emerging industry used to improve activities in the field of finance. And as an example of this technology can be referred to the use of smartphones in banking services or what is known as cellular banks, as well as investment services via mobile phone and cryptocurrencies, which aim to make financial services accessible to the public. The current stage is an important stage for workers in the financial services sector, with this huge number of technological innovations that have changed the way of doing business, transfer of funds and daily transactions. The financial technology sector is one of the most distinguished sectors that receive support from decision-makers around the world and with the increase in the ability to stage a technological revolution in this vital sector, and the more creativity and efficiency it witnesses to achieve prosperity and

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growth, so it is not surprising that the expectations of the investments in this sector reach several billion in the next few years with the aim of creating more advanced financial technological services to meet the growing needs of customers.

The term Fintech has become one of the most common terms among investors who invested more than \$ 50 billion in the financial and economic sector between 2010 and 2015 (Accenture, 2015; Hammouri et al., 2021). Banking institutions, especially the most successful banks, are the ones that have reached the process of transition from traditional work to digital work (King, 2014). Digital banks usually use sophisticated and highly digital banking systems that can quickly apply new services. Digital banks agree with global regulations and systems, which their goal is to go along with the technological revolution to increase the number of their customers and thus their profits, unlike traditional banks that rely on their traditional services. Currently, Fintech has already been implemented in many countries of the world like Korea, China, Finland, United Kingdom and India (Choi et al., 2016). However, in developing countries like Jordan, fintech is still new. But fintech received a lot of attention from policy makers and researchers, especially regulators in the banking industry, as the Central Bank of Jordan launched the FinTech Regulatory Sandbox during 2018, which is considered an experimental environment that allows for the possibility of managing the necessary tests and examinations for innovative financial technology in a safe, controlled environment, within clear, specific standards, timelines, and with the highest degree of transparency. Also, the applicant shall be granted a successful product / idea examination certificate, after subjecting it to the evaluation and selection principles set forth in the Fintech Innovation Lab regulatory document. However, almost no empirical research has been conducted to identify fintech applications in banking Jordan.

The growing interest in fintech will soon develop in the academic literature, as there is currently a significant shortage of evidence in this area. Fintech is a developing concept that has not yet created but little evidence and time-series data of statistical significance for analysis, as researchers have relied only on secondary data to work with. But with indications already emerging that these financial technologies can significantly affect the use of cash and financial practices, this called for the emergence of a study based on a practical application based on real financial data. Therefore, this research aims to fill the gap in previous research on fintech that is still under development, and which is still being researched by providing an alternative approach to understanding how different business levels have stimulated the emergence of innovation-focused fintech companies, and what are the motives of success. Moreover, this research provides information for financial researchers and decision-makers to better understand the areas of the financial sector. In addition to creating new ideas by presenting an alternative evolutionary approach that can be used as a guideline in further academic research on this topic. Meanwhile, the article focuses on global trends and connects the concept of financial technologies with social and economic aspects. It also focuses on the impact of this technology on the Jordanian financial sector.

2. An Overview of Fintech in Jordan:

In Jordan, although fintech is still new, the number of fintech companies is increasing rapidly. Most fintech companies provide clients with online payment tools such as (Efwaterkom). Efwaterkom has provided clients with more options to take advantage of financial services, moreover, the services provided by fintech companies are often creative, so they help clients have more interesting experiences. Therefore, financial technology has a huge impact on the banking industry. If the banks do not update this trend, they will fall behind, and not keep track with global development trends, which will enormously affect the long-term development of the bank. By cooperating with fintech companies, banks will have a great advantage when they make the most of new technological innovations, helping the bank to improve service quality, reduce costs, and increase productivity.

3. Literature Review

3.1 Related literature to Fintech

The banking sector, in particular, is seen as the pioneer sector in the use of information technology (Barras, 1986, 1990). In recent years, Financial Technology (or FinTech) is seen as one of the technologies that will revolutionize the financial services industry. The term "FinTech" includes technology-enabled services using integrated information technology. Payment innovations at FinTech offer a new landscape in the digital age of the financial industry. It also provides a bank and non-banking platform to facilitate cross-network transfers and payment services (Thompson, 2017; Shim & Shin 2017). With financial technology (fintech), banks will expand the range of providing services to customers (Philippon 2015; Nakashima, 2018; Almajali et al., 2021). Therefore, fintech is not a simple combination of information technology and financial services, but a technological application of traditional services for expanding up the range (Arner et al., 2015; Halimi et al., 2021). Fintech gives customers many new experience opportunities and helps clients to conduct transactions more conveniently (Devadevan, 2013; Ra'd Almestarihi et al., 2021; Norman et al., 2013; Al-smadi et al., 2018; Alghusin et al., 2020). Indeed, fintech can help customers experience banking services on mobile devices, such as mobile phones and tablets. Therefore, customers can use banking services everywhere, instead of having to go to traditional services (Kim et al., 2016). and for that, it can be said that fintech services play a very important role in the banking sector (Kim et al., 2016; Fuster et al., 2019) and at the same time bring many benefits to clients (Salmony, 2014; Chen, Wu & Yang 2019).

Financial technology exists in nearly every business area that traditional financial institutions have served like: commercial lending, capital markets and trade, credit scores and analyses, financial services and infrastructure, public lending, insurance, commercial services, real estate lending, personal and customer lending, infrastructure. For processing and payments, regulation and compliance, real estate investment, bank balance and transactions (CB Insights 2017). Lending is a major goal for fintech companies, as the avoidance of providing credit to banks due to the financial crisis has made it difficult for clients to obtain personal or business loans. The lending practices of traditional financial institutions have been extensively researched regarding the cost and efficiency of gathering information about clients, reducing information asymmetries, and taking into account other customer data collected during banking relationship practices (Bikker-Haaf, 2002; DeYoung et al 2006).

Wide area networks provided a way to minimize the distance between the borrower and the lender, decrease moral hazard (Chan Thakor, 1987), and acted as a barrier to entry into financial institutions with low capital resources. Reducing distance is an important part of lending, as it helps to improve information gathering for both lenders and borrowers. As research shows, banks have been willing to lend customers and small businesses who have better information about them, mostly gathered through their close client relationships. The reason for the increased efficiency of companies that use FinTech in their core operations is due to the elimination of intermediaries in the loan-granting process, which significantly reduces transaction costs for consumers (KPMG, 2016; Lines, 2016).

New technologies such as “BlockChain” also improve efficiency (Peters & Panayi, 2016; Wood, 2015). Since banks are usually less likely to quickly adopt new technologies due to the organizational environment (Hannan& McDowell, 1984) and have often relied on IT infrastructure for decades, these innovations are expected to benefit FinTech companies more. According to Peters and Panayi (2016), reducing counterparty and settlement risks in shortening the settlement cycle from 3 days to 2 days will benefit many markets in reducing counterparty risk, and BlockChain technologies can lead to near-instant settlement. A counteractive look at FinTech confirms that advances in financial technology have failed to reduce brokerage costs (Philippon, 2015; Nusairat et al., 2021). According to Buchak et al. (2017) fintech lenders actually offer higher interest rates than lenders who are not specialized in financial technology. To improve the quality of fintech services in the banking sector, it is important to consider the factors that affect clients' intention to use fintech services. Because when increasing the intention to use financial technology services to clients, banks will expand their market share and improve operational efficiency. About the intention of the customer, this can be explained as readiness for future service. And the intention can explain 70% of actual customer service behavior (Venkatesh et al., 2003).

3.2 Theories related to technology acceptance

Many theories have been developed to explain the user's intention to use information system technology. Among others, Technology Acceptance Models (Davis, 1989) have been extensively studied in the literature. TAM was initially proposed by Davis (1989) and it is actually information service theory that model how users come to accept and use a specific technology (Yusuf Dauda& Lee, 2015). The TAM model has been expanded by several researchers and has been applied to many different technologies including e-learning (Cheung & Vogel, 2013), teleconferencing (Park et al., 2014), short message service (Muk& Chung, 2015), etc. According to TAM, users' adoption of information technology is determined by perceived usefulness (PU) and perceived ease of use (PEOU) and thus assumed to determine a person's attitude towards using the technology. However, only perceived usefulness and perceived ease of use was theorized as the determinant of e-government adoption (Fig. 1). This is due to the functionality of the e-government equipment makes it likely that consumers perceive it as very useful and easy to use as its capability to provide government news, information as well as transaction.

Table 1
Factors affecting customers' intention to use Fintech

N.	Main Factors	Impacts	References
1	Perceived usefulness (PU)	Positive	Ryu, 2018; Kim et al. 2016; Lee 2017; Wonglimpiyarat, 2017; Tran et al., 2018
2	Perceived ease of use (PEU)	Positive	(Chau & Ngai, 2010; Abbad, 2013; Riquelme& Rios, 2010; Akturan & Tezcan, 2012; Szopinski, 2016
3	Customer trust (TRU)	Positive	Hu et al., 2019; Kesharwani & Bisht, 2012; Hanafizadeh et al., 2014
4	Social influence (SI)	Positive	Koksal, 2016; Abrahao et al., 2016; Kissi et al., 2017; Isaac et al., 2019; Oliveira et al., 2016

4. Research Methodology

4.1 Respondent

Users of fintech from different sectors. Most of the samples were selected from banks users.

4.2 Instrument

Survey was built to include 577 clients from different banks in the capital of Jordan. All measurements of the constructs were adapted from previous literature to ensure survey content validity. A five-point has been chosen, from 1 ‘strongly disagree’ to 5 ‘strongly agree’. and it depended on previous studies (Venkatesh et al., 2003).

4.3 Analysis method

This study employed PLS version 3.0. Also, this study employed the descriptive form in presenting the rate of response and the profile of respondents. Then, the inferential analyses were carried out.

4.4 Research Model

The research model and study hypotheses were built based on the results of previous studies, as shown in the following figure:

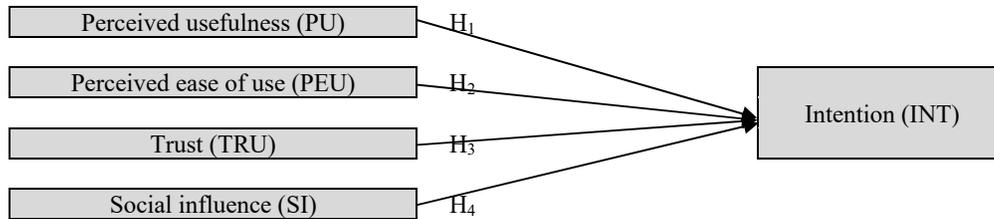


Fig. 1. Research Variables Proposed by: Lien et al. (2020)

5. Results

Out of the 250 were returned, 30 were omitted due to incompleteness. Hence, the total amount of usable questionnaires in this study was 220.

5.1 Reliability and Convergent Validity

Table 2

The Result of Convergent Validity for the CFA Model on the Research

Construct	Items	F. loading	AVE	CR
Perceived usefulness (PU)	PU 1	0.890	0.780	0.947
	PU 2	0.871		
	PU 3	0.871		
	PU 4	0.872		
	PU 5	0.911		
Social influence (SI)	SI 1	0.855	0.705	0.923
	SI 2	0.855		
	SI 3	0.831		
	SI 4	0.825		
	SI 5	0.832		
Trust (TRU)	TRU 1	0.877	0.806	0.954
	TRU 2	0.952		
	TRU 3	0.870		
	TRU 4	0.825		
	TRU 5	0.958		
Perceived ease of use (PEU)	PEU 1	0.800	0.692	0.918
	PEU 2	0.844		
	PEU 3	0.856		
	PEU 4	0.844		
	PEU 5	0.815		
Intention (INT)	INT 1	0.839	0.702	0.904
	INT 2	0.870		
	INT 3	0.847		
	INT 4	0.792		

Table 2 displays the evaluation outcomes of the standardized factor loadings of model items. As can be observed, the initial standardized factor loadings were all greater than 0.6 (the loadings range from 0.792 to 0.958). As can be seen in Table 1, the values of AVE for all constructs ranged from 0.692 to 0.780. These values were all greater than the cut-off value of 0.5 as proposed in (Hair et al., 2010). Furthermore, the values of composite reliability for all constructs ranged from 0.904 to 0.954, and these obtained values all surpassed the proposed value of 0.7 for all constructs as in (Hair et al., 2010).

5.2 Discriminant validity

The current study obtained HTMT for the model constructs (Henseler, 2015)

Table 3
The HTMT for constructs

	PU	SI	TRU	PEU	INT
PU					
SI	0.821				
TRU	0.752	0.800			
PEU	0.694	0.670	0.882		
INT	0.789	0.706	0.731	0.648	

As shown in Table 3, all the HTMT values of the constructs in the CFA model were below 0.90, ranging from 0.648 to 0.882. Therefore, it confirms that each latent construct measurement was totally discriminating to each other (Henseler et al., 2015). Upon examining convergent validity and discriminant validity of the measurement model, it can be concluded that the measurement scale to assess the constructs and their relative items in the overall CFA model was reliable and valid.

5.3 Hypothesized Direct Effects of the Constructs in the Structural Model

Table 4
Hypothesized Direct Effects of the Constructs in the Structural Model

Path	S.B	S.D	T.value	P.value	VIF	R	F	Q	Decision
PU → INT	0.390	0.081	4.819	0.000	3.152	0.513	0.099	0.241	supported
PEU → INT	0.218	0.066	3.318	0.000	2.419		0.040		supported
TRU → INT	0.165	0.078	2.119	0.017	1.069		0.052		supported
SI → INT	0.188	0.071	2.644	0.004	2.162		0.044		supported

As can be observed in Table 4 The values of R2 for intention was 0.513, This indicates, for example, 51,3 percent of variations in intention is explained by its predictors (Perceived usefulness, Perceived ease of use, Customer trust, Social influence) findings showed that the R² values satisfy the requirement for the 0.19 cut off value as recommended by (Chin, 1998), the model exhibits an acceptable fit and high predictive relevance. while the VIF for inner model values were 3.152, 2.419, 1.069, 2.162 respectively represented (Perceived usefulness, Perceived ease of use, Customer trust, Social influence) which was less than 5, (Hair et al., 2014), further in the prediction intention, the p-value of (Perceived usefulness, Perceived ease of use, Customer trust, Social influence) respectively were 0.000, 0.000, 0.017, 0.004 This means that the probability of achieving through absolute p-value is 0.000, 0.000, 0.017, 0.004. Further, the standard beta (S.B) values for (Perceived usefulness, Perceived ease of use, Customer trust, Social influence) were respectively (0.390, 0.218, 0.165, 0.188) Hence, H1, H2, H3, H4 supported because they had a positive effect.

6. Conclusion

Undoubtedly, referring to the early literary studies, the services that fintech contains are very important to the banking sector, using multivariate regression, the current research has shown the factors that would influence the customers' intention to use fintech services, accordingly, the variables that were applied in this research showed a positive connection between intention to use fintech and both processing unite(PU), social impact (SI), customer's trust (TRU) and perceived ease of use (PEU). Therefore, in order to develop and document the link between customers' intention to use financial technology services and other factors, it is vitally important that banks take into account the elements of the service characteristics provided to the customer, such as ease of use, customer's trust and social impact.

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