

Factors Affect Adopting Islamic Banking and Finance in Libya: The Moderating Effect of Fin-Tech

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Abstract

The aim of this study is to explore the role of behavioral factors on the adoption of Islamic banking and finance among users of banking services in Tripoli, Libya, which includes; Knowledge and Awareness, Attitude, Subjective Norms, Perceived behavioural control, and Religiosity. In addition, this study investigates the moderating effect of Fin-Tech technology on the relationship between the factors that affects the adoption of Islamic banking and finance. To achieve this purpose, five theories were reviewed, namely, Social Cognitive Theory, Diffusion of innovations, the theory of reasoned action, Theory of Planned Behaviour, and Technology Acceptance Model. In addition to the theories, recent literature published in academic journals were reviewed to justify the selection of the variables. In this regard, quantitative research methods were applied by using the means of questionnaire survey, which was distributed to 408 customers of banking services in Tripoli, Libya. To conduct data analysis, IBM SPSS 26.0 and SMART PLS 3.3 were utilized. The results of this study showed that there is a significant relationship between Knowledge and Awareness, Attitude, Subjective Norms, and Religiosity from hand, and IBF adoption in Libya from another hand. But unlike the majority of the published literature, Perceived behavioural control was found to be insignificant with IBF adoption in Libya. In addition, FIN-Tech technology found to have significant moderating influence on the relationship between Knowledge and Awareness, Attitude, and Perceived Behavioural Control with IBF adoption. However, Fin-Tech did not play a significant moderating influence on the relationship between Subjective Norms and Religiosity with IBF adoption. The implications of this study is wide, for example, with clear understanding and awareness regarding Islamic banks, users will likely accept IBF, therefore informed promotion is essential for Islamic banks to create knowledge and awareness.

Keywords: Awareness, Attitude, Subjective Norms, Religiosity, Perceived Behavioural, Fin-Tech, IBF adoption

1. Introduction

The abbreviated version of the word “financial technology” is referred to as “Fin-Tech.” This term is used to refer to businesses or representatives of businesses that combine traditional financial services with cutting-edge technological advancements. New entrants into a market will often focus their product offerings on those that are Internet-based and application-oriented. In general, the goal of Fin-Tech companies is to attract clients with goods and services that are designed to be easier to use, more efficient, more transparent, and more automated than those that are presently on the market. Traditional banking institutions

have not yet made use of all of the opportunities for enhancements along these lines. In addition to the distribution of insurance and other financial instruments as well as the provision of third-party services, Fin-Tech companies also provide goods and services in the banking industry. Companies that just provide the technology (such as software solutions) to financial service providers are included in the “Fin-Tech” industry according to a broad interpretation of the term “Fin-Tech” (Mohamed & Ali, 2018a; M. Rahman et al., 2021).

In the end, it is not feasible to establish a limited definition of “Fin-Tech” that applies to all of the businesses that are often associated with the word. This is because “Fin-Tech”

refers to a broad category of industries. There are always enough exceptions to make the majority of examples insufficient for developing a broad definition, despite the fact that the majority of firms operating in the Fin-Tech business have certain characteristics. For instance, many of the Fin-Tech businesses are still in the beginning stages of their business development. The fact that not all financial technology businesses are start-ups, however, means that this category cannot be a fundamental component of a definition of financial technology (Billah, 2019).

Fin-Tech companies have the goal of unseating conventional finance institutions as the dominant players in the financial industry. This resulted in a situation that was entirely competitive. However, throughout the course of time, that viewpoint has evolved. Fin-Tech companies have recently come to the realisation that it is not simple to develop and expand in the finance industry. They are also aware that banks are enormous businesses that have a great deal of competence in the provision of financial services. The banking industry and the financial technology industry have both recently begun to investigate the possibility of working together. Banks have come to the realisation that by forming partnerships with Fin-Tech companies, they would be able to benefit from the adaptable attitude and technical background of these start-ups, which will allow them to more readily convert their digital capabilities (Söylemez, 2020).

2. Problem statement

The capacity of Islamic banks to market their products and services has not kept pace with the expansion of Islamic financial institutions, notably Islamic banks, in Libya. The potential growth of Islamic banking is hampered by people's lack of knowledge with the products and services provided by Islamic financial banks due to a lack of education and awareness (El-Brassi et al., 2018). The fact that just 38.03 percent of Libyans are financially literate in accordance with Islamic principles is evidence of the financial state of affairs in the country. The low degree of adoption of Islamic financial services is reflected in this literacy rate. As a result of this, Islamic banks provide a wide range of innovative service options to cater to the requirements of consumers, both in terms of funding and financing (W. A. Albashir et al., 2018).

Customers do have the option of banking with an Islamic financial institution. Conventional banks are forced to compete with Islamic banks in order to keep their market share since Islamic banking has become one of the industries with the fastest increasing rates. They have a lot of experience in the banking industry, which is quite important in the modern-day service sector due to the function it plays. The incorporation of Islamic banking into the existing banking system resulted in a shift in the existing

financial landscape. This occurred as a result of the availability of a banking system that impacts customers on both a religious and social level. This introduces additional considerations for customers when choosing an Islamic financial institution. Consumers are now in a position to expect better quality goods and services as a direct result of the evolution of their shifting preferences. In addition, when a nation has more than one banking system, customers have the option of selecting the banking goods and services that are tailored to meet their specific requirements. The consumer now has more options to choose and select from. Therefore, conventional banking and Islamic banking will need to compete with one another more on the finest goods and services that each can provide to their respective client bases (Ezeh & Nkamnebe, 2021; Iqbal & Molyneux, 2019; Yunus et al., 2018).

As a result, the purpose of this study is to find a solution to the problems and challenges mentioned above by focusing on the role that a number of different factors play in Islamic banking and finance (IBF). These factors include knowledge and awareness, attitude, subjective norms, perceived behavioural control, and religiosity. In addition, the present research will bring another contribution to the field of Islamic banking in Libya by considering the moderating function of financial technology (Fin-Tech) on the relationship between the variables that influence the industry.

3. Research questions

1. What is the relationship between Knowledge and Awareness on the IBF adoption in Libya?
2. What is the relationship between Attitude on the IBF adoption in Libya?
3. What is the relationship between Subjective norms on the IBF adoption in Libya?
4. What is the relationship between Perceived Behavioural Control on the IBF adoption in Libya?
5. What is the relationship between Religiosity (Islamic Values) on the IBF adoption in Libya?
6. What is the moderating effect of Fin-Tech on the relationship between Knowledge and Awareness, Attitude, Subjective norms, and Religiosity on the IBF adoption in Libya?

4. Research objective

1. To explore the relationship between Knowledge and Awareness on the IBF adoption in Libya.
2. To explore the relationship between Attitude on the IBF adoption in Libya.
3. To explore the relationship between Subjective norms on the IBF adoption in Libya.

4. To explore the relationship between Perceived Behavioural Control on the IBF adoption in Libya.
5. To explore the relationship between Religiosity (Islamic Values) on the IBF adoption in Libya.
6. To explore the moderating effect of Fin-Tech on the relationship between Knowledge and Awareness, Attitude, Subjective norms, and Religiosity on the IBF adoption in Libya.

5. Literature review

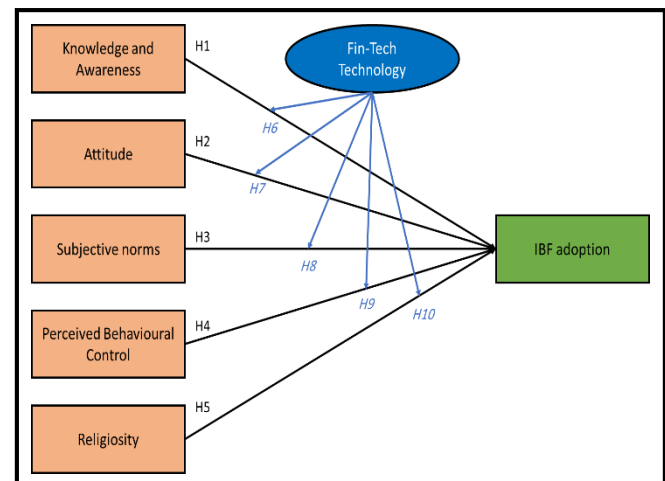
5.1 Fin-Tech

Fin-Tech: A financial technology firm is a company that delivers or facilitates financial services through the use of emerging technology. The term “fin-tech” refers to a company that offers financial services through the use of software and modern technology (Söylemez, 2020). Nugraha and Hakimah (2019) carried out a research with the objective of determining the impact that relational competencies have on the efficiency of Indonesian supply chains. The purpose of this research was also to evaluate the moderating influence that technological adoption has on the relationship between relational capacities and supply chain Performance. According to the results of this relationship, the adoption of technology does not have a moderating impact in the relationship between supply chain performance and customer relationships (Nugraha & Hakimah, 2019). Maxwell (2020) uses technology as a moderator factor to investigate the influence that cooperative competition has on the experience that consumers have in the banking business. According to the findings, the various aspects of cooperation have a significant impact on the degree of satisfaction a consumer derives from their interactions with a company's products or services. According to the findings of the research, consumer satisfaction is significantly influenced by both significant advancement and business competition (Maxwell, 2020).

IBF adoption Islamic Banking and Finance: Infrastructure of banks according to Sharia banking (Islamic Law). There is a prohibition in Sharia against either receiving or giving interest. It is also forbidden to put money into businesses that sell items or provide services that are in conflict with Islamic principles, such as consuming alcoholic beverages, eating pork, or smoking cigarettes, for example (Ergeç & Kaytancı, 2017).

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Islamic principles, such as consuming alcoholic beverages, eating pork, or smoking cigarettes, for example (Ergeç & Kaytancı, 2017). According to the findings of the Structural Equation Modelling (SEM) analysis carried out by Jaffar and Musa (2016), each of the five important beliefs or determinants of attitude that were looked at is statistically significant. It was revealed that religious duty had the most significant effect on one's attitude. The findings also indicate that the perceived behavioural control and subjective norms had a significant effect on the entrepreneurs' desire to embrace the new adoption. The results of the research provide useful insights that may be used towards the formulation of successful strategies, particularly for industry practitioners, in the process of bridging the gap between the two sectors of Islamic finance and Halal (Jaffar & Musa, 2016). Overall, the proposed framework is illustrated in Figure



6. Research methodology

In this research, primary data was collected from Beneficiaries of financial services in Libya who are anticipated to use IBF. The researcher distributed 408 questionnaires. The development of instruments was carefully executed in order to reflect the nature of this study. As such, the questionnaire was designed to include 34 items and the variables were measured using the five-point Likert scale, with five standing for ‘Strongly Agree’ and one standing for ‘Strongly Disagree’. Due to the fact that the respondents were Arabic speakers, it was vital for the questionnaire to be precisely translated from English to Arabic. Therefore, a back translation was performed which is a procedure extensively applied to test the precision of the translation in a cross-cultural survey (Brislin, 1970).

Therefore, a total of 34 items has been developed for this study as shown in Table 1.

Table 1: Questionnaire Development

#	Variables	Section	No. of questions	Sources
1	Demographical details	(1)	4	Gender, Age, Years of service and Years of Experience (Zairah Ab Rahim & Samuri, 2018)
2	Knowledge and Awareness	(2)	5	(Yang et al., 2020)
3	Attitude	(3)	5	(Hagger et al., 2022)
4	Perceived behavioral control	(4)	5	(Hagger et al., 2022)
5	Religiosity	(5)	5	(Kuo et al., 2011)
6	Fin-Tech	(6)	5	(Atkinson, 2007; Teo et al., 1997)
7	Islamic Banking and Finance	(7)	5	

7. Results

The current study has assessed the proposed model in two steps consisting of the assessment of the measurement model (outer model) and the assessment of the structural model (inner model). However, prior to these two steps, a brief explanation is given regarding the respondents' profiles.

8. Analysis

The first segment of the instrument compiled information on background profile of the respondents which comprises of their Gender, Age, Years of service and Years of Experience. The characteristics of each demographic profile are described below in Table 1.

Table 1. Sample characteristics (n=345).

Item	Options	Frequency	Percentage
Gender	Male	296	72.5
	Female	112	27.5
Age	20-25 years	23	5.6
	26-35 years	132	32.3
	36-45 years	112	27.4
	46-55 years	87	21.3

Years of service	56 years and above	54	13.2
Years of service	1-3 years	61	14.9
	3-5 years	249	61.0
	5-10 years	98	24.0
Years of Experience	University degree	233	57.1
	Master	132	32.3
	PhD	43	10.5

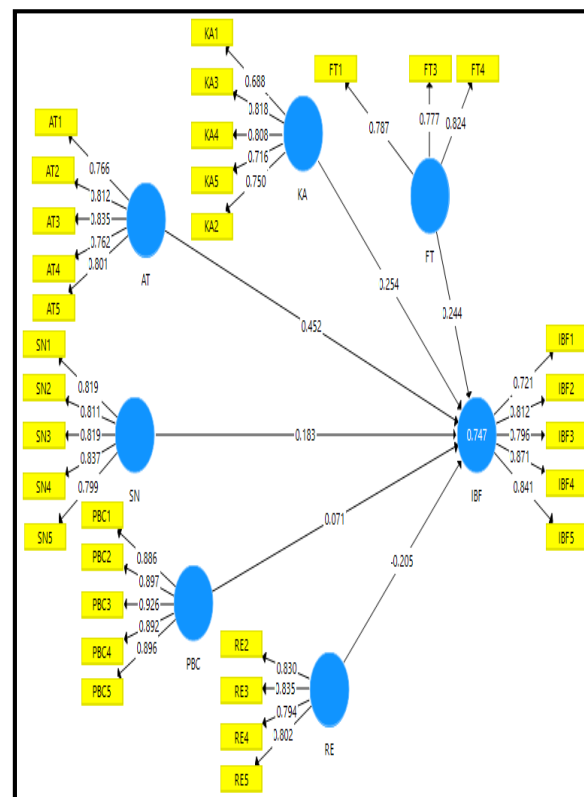


Figure 2: PLS algorithm results

Secondly, the discriminant validity was examined in order to assess how truly distinct a construct is from other constructs. In the area of distinguishing validity, the correlations between variables. In the estimation of the model did not exceed 0.95, as suggested by Kline (2016) (Kline, 2016), and the validity was tested based on measurements of the correlations between constructs and the square root of the average variance derived for a construct (Fornell & Larcker, 1981; Kline, 2016). Hence, Table 3 contains the results of the Fornell and Larcker Criterion and shows no value above the recommended cutoff point of 0.95 (Fornell & Larcker, 1981).

9. Discussion

The main objective of the current study is to explore the relationship between Knowledge and Awareness, Attitude, Subjective Norms, Perceived behavioural control, and Religiosity with Islamic Banking and Finance adoption (IBF) in Libya, in addition to the moderating effect of Fin-tech.

The relationship between Knowledge and Awareness and IBF adoption was statistically positive and significant. The quantitative data analysis shows that Knowledge and Awareness had 20.2% of the predictive power (β) in predicting high level of IBF adoption (with p-value lower than the cut-off point 0.05), which implies that Knowledge and Awareness impacts the IBF adoption. Thus, H1 was supported. This finding was consistent with the previous published literature. However, other literature was found disagreeing with the findings reached by the researcher (Ali et al., 2018; Kaabachi & Obeid, 2019; Kaakeh et al., 2019). The relationship between Attitude and IBF adoption was statistically positive and significant. The quantitative data analysis shows that Attitude had 50.1% of the predictive power (β) in predicting high level of IBF adoption (with p-value lower than the cut-off point 0.05), which implies that Attitude impacts the IBF adoption. Thus, H2 was supported. This finding was consistent with the previous published literature. However, other literature was found disagreeing with the findings reached by the researcher (Aziz & Afaq, 2018; Charag et al., 2020; Kaakeh et al., 2019; Wardana et al., 2021).

The relationship between Subjective Norms and IBF adoption was statistically positive and significant. The quantitative data analysis shows that Subjective Norms had 21.2% of the predictive power (β) in predicting high level of IBF adoption (with p-value lower than the cut-off point 0.05), which implies that Subjective Norms impacts the IBF adoption. Thus, H3 was supported. This finding was consistent with the previous published literature. However, other literature was found disagreeing with the findings reached by the researcher. Janah (Bananuka et al., 2019, 2020; Janah et al., 2020).

The relationship between Perceived Behavioral Control and IBF adoption was statistically positive, but insignificant. The quantitative data analysis shows that Perceived Behavioral Control had only 3.2% of the predictive power (β) in predicting high level of IBF adoption (with p-value higher than the cut-off point 0.05), which implies that Perceived Behavioral Control do not impact the IBF adoption. Thus, H4 was rejected. This finding was consistent with the previous published literature. However, other literature was found disagreeing with the findings

reached by the researcher (Ayyub et al., 2020; Aziz & Afaq, 2018; Wardana et al., 2021).

The relationship between Religiosity and IBF adoption was statistically positive and significant. The quantitative data analysis shows that Religiosity had 18.9% of the predictive power (β) in predicting high level of IBF adoption (with p-value lower than the cut-off point 0.05), which implies that Religiosity impacts the IBF adoption. Thus, H4 was supported. This finding was consistent with the previous published literature. However, other literature was found disagreeing with the findings reached by the researcher (Bananuka et al., 2019, 2020; Janah et al., 2020).

Moving on to the moderating effect of Fin-tech. Firstly, H6 was found to be supported as Fin-Tech played a significant moderating role on the relationship between Knowledge and Awareness and IBF adoption, which means that with high level of Fin-Tech usage, the adoption of IBF in Libya will highly be affected by the Knowledge and Awareness about Islamic banks services and influenced by their Fin-Tech usage. Secondly, H7 was found to be supported as Fin-Tech moderates the relationship between attitude and IBF adoption. However, H8 was found to be rejected, as Fin-Tech did not play a significant moderating effect on the relationship between both of Subjective Norms and IBF adoption. Moreover, H9 was proven to be supported, as Fin-Tech is playing a significant moderating effect on the relationship between Perceived Behavioural Control and IBF adoption. Finally, the moderating effect of Fin-Tech on the relationship between Religiosity and IBF adoption was shown to be insignificant. The significance of the moderating effect of Tech technology is in consistent with the previous published literature (Liu & Gao, 2022; Maxwell, 2020; Nugraha & Hakimah, 2019; Owusu-Agyeman et al., 2021; Shim et al., 2021).

10. Future studies recommendations

This research was surrounded with many limitations that deserved to be addressed in this chapter, which are:

The current study considered all types of Islamic banking and services institutions in Libya. However, only users Islamic banks in Tripoli was surveyed.

This study was conducted during a short period of time, redoing the same study with the same framework for longer period of time would enhance the results

This study was limited to single mode of research methods, which was the quantitative research methods.

This study was limited to 5 independent variables, Knowledge and Awareness, Attitude, Subjective Norms, Perceived behavioural control, and Religiosity, there are

long list of factors that could be found in the published literature, which may influence IBF adoption.

This study was limited geographically to one country only, namely; Libya.

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