

PANDEMIC CRISIS AND FINTECH – MALAYSIAN EVIDENCE

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Abstract: *The recent pandemic crisis that occurred across the globe has changed the way human lives including the use of information and communication technologies (ICT). However, the adoption of technology due to the crisis in financial function is still under research, knowing that Malaysia is an emerging country that still lag behind in responding to Industrial Revolution 4.0. Thus, the purpose of this study is to examine the current state of technology adoption by the finance professional and their determinants to adopt technology, specifically financial technology (Fintech) in the workplace. To achieve these purposes, questionnaires were distributed online to collect the information. It comprises three sections namely demographic information, information on respondents' experience and knowledge on Fintech and finally the factors that affect users' intention to use Fintech. This research adopted the Unified Theory of Acceptance and Use of Technology (UTAUT) theoretical framework as a theoretical foundation of the study. The findings showed that while the respondents are considered as highly experienced and heavy technology users, they have a moderate knowledge of technology. In addition, performance expectancy, behavioral intention and attitude are the biggest influence for them to adopt Fintech in the workplace. This finding shows that many finance professionals in Malaysia do not refuse to revolutionize their work process by transforming their job tools from manual-based to computerized operation and use more sophisticated devices.*

Keywords: Financial technology; Fintech; UTAUT; pandemic; COVID-19

1. Introduction

COVID-9 has affected many jobs process globally. The accounting industry is no exception, as the accountant must adapt to remote work and changing regulations. Additionally, the economic downturn caused by the pandemic has resulted in increased demand for financial advice and assistance from accountants. This is because despite all these challenges, accountants have been in high demand due to the economic impact of the pandemic, with many individuals and businesses seeking financial guidance and support such as cost-cutting measures. As a result, accountants have had to quickly adapt to new regulations and technologies to continue providing essential services to their clients, making the role of accountants more important than ever in navigating these challenging times.

Besides, the accountants also had to navigate the challenges of managing their clients' finances during a time of great uncertainty and financial instability. Despite these challenges, many accountants have risen to the occasion and provided essential services to individuals and businesses during this difficult time. Furthermore, the pandemic has also highlighted the importance of accountants in helping businesses navigate financial challenges and plan for future uncertainties.

Due to this, the accountant has no choice but to adopt technology in their workplace. Based on Donthu and Gustafsson (2020), the severe global challenges posed by COVID-19 can be mitigated using a range of digital technologies, like the Internet of things, artificial intelligence, big data analytics, and drones. Many prior studies have conducted the impact of COVID-19 on the business, economy and other professions (Abhari et al., 2022; Batisti et al., 2022; Bardhan et. al., 2022) . However, the impact of COVID-19 on the role of accountant and finance professional is still under research. Thus, the purpose of this study is to examine the current state of technology adoption by the finance professional and their determinants to adopt technology, specifically financial technology (Fintech) in the workplace.

2. Literature Review

2.1 Impact of COVID-19

COVID-19 is not only having serious implications for people's health but also post significant impact on business and economy. It is also connected to several new challenges due to the main economics activities having been restrained. The degree of COVID-19 has intensified insecurity regarding consumption and investment (Donthu & Gustafsson, 2020). As many countries imposed travel restriction, increase the length of lockdown and limit the social activities, many general economy activities are severely affected (Verma & Gustafsson, 2020). This pandemic crisis had created spillover effects throughout global and regional supply chains and disrupted demand and supply (Pantano, Pizzi, Scarpi, & Dennis, 2020). Social distancing policies also nearly ruined the service industries like travel, tourism and hospitality that could cause a recession (Donthu & Gustafsson, 2020).

Due to travel restriction for example, the outbreak of COVID-19 had significant impact on the global value chains. The outbreak which initially concentrated in China's major manufacturing centers obstructed global industry when the Chinese government imposed the lockdown including cross border restriction and domestic movement control (UNDP, 2020). This action not only affected value chains in East and Southeast Asia, but when the outbreak became a global pandemic, it has critically halted value chains in USA and Europe.

The pandemic too has caused global social crisis due to restriction control movement. Many businesses are closed due to government-imposed restrictions. As a result, many lost employments which added to the increase of poverty (UNDP, 2020). The ongoing COVID-19 pandemic influences the way of life of people and economic activities such as corporate social responsibility, consumer ethics, and marketing philosophy.

2.2 Role of Technology in Human Life

Before the pandemic, humans have undergone many information technology revolutions. It starts with Industrial Revolution 1.0 (IR1.0) which mechanical engineering is powered by water and steam. The discovery of electricity, gas and oil facilitate encouraged IR 2.0 that established mass labor production. Due to human limitation, IR3.0 occurred that based on electronic. The explosion of internet technology encourages digital revolution which

transforms analogue to digital technology. Finally, IR4.0 that occurred today blends humanity and technology in which people and technology seamlessly connected to each other.

Fundamentally, the objective of IR 4.0 is to provide mass customization products that are enabled by information technology. It also means to provide automatic and flexible production chain, ability to track parts and products, to facilitate communication among parts, products, machines and human, to achieve Internet of Things (IoT)-enabled production optimization in smart factories and to provide new types of services and business models of interaction in the value chain (Lu, 2017). Alaloul et al. (2020) identified IR 4.0 has the ability to improve product quality, reduce time to market the product and increase manufacturing performance.

The advancement in technology throughout industrial revolution give impact to the way people work and the role of humans in the economy such as better management of inventory (Karim et al., 2018), higher protection to customer data security (Abidin et al., 2019) and prevent occupational fraud (Nawawi & Salin, 2018). At top level, the use of technology will improve corporate governance as it will improve transparency, promote accountability and better dissemination of corporate information (Shahar et al., 2020; Nor et al., 2018). At the beginning of IR 1.0, workers are constantly exposed to danger at work resulting from underdeveloped technology. During IR 2.0, workers have to follow a routine schedule. The place of work shifted from the home to the factory and pace of work driven by machine. Meanwhile, on-premises technology, email as the primary form of communication and working in cubicles are amongst the characteristics of working environment during IR 3.0 era.

IR 4.0 facilitates networking and collaboration between humans and machines, hence changes the way people work. Flexible working hours become more dominance. Therefore, collaborative technology such as cloud technology and communication technology allowing workers to cooperate, share, search, communicate and engage with people and information anytime, anywhere and on any devices (Morgan 2013). In line with digital workplace becomes disruptive innovation in IR 4.0, a study by Bakar et al. (2020) indicates that most public organizations in Malaysia begin to set up a process workflow and taxonomy structure in their digital workplace design.

Other scholars such as Marinova et al. (2017) identifies that in servicing customer, company can use technology in three key roles. First is augmentation of service employees, in which technology is used to assist and complement service employees to provide better service outcomes. Second is substitution of service employees. In this role, advancement in automation robots, sensor fusion, deep learning algorithms and smart devices are causing roles of traditional service employees to become obsolete. Finally, network facilitation. In this scenario, technology is utilized to connect both human and technological rather than replaced them.

Rymarczyk (2020) on the other hand concurs that a few IR 4.0 tools and their applications such as blockchain are now used to create cryptocurrencies. In the future, blockchain currency will be used widely particularly to cater for complex and intelligent transactions. Another IR4.0 tool is the use of cloud technology to support digital workplace and eliminates the need to incur capital expenditure for the purchase of hardware and software.

Based on this literature, it is imperative that while COVID-19 severely impacts the business and operation of the company, the existence of the technology is much needed to survive the business or at least minimize the impact from the pandemic crisis. In this context, the role of technology for the accountant and finance professional is important to ensure the accounting and finance activity is still functional.

2.3 Impact of COVID-19 on Accounting and Finance Function

The main concern of this study was related to the impact of COVID-19 on the accounting and finance related process. Interestingly, a survey by QuickFee (2020) discovered that over 63 percent of leading accounting and law firms in the United States recorded an increase in the demand of their services amidst the COVID-19 pandemic. These findings were consistent with another survey conducted by ACCA (2020) which found that the auditors, accountants, and advisers were optimistic of the demands for their services. QuickFee's (2020) survey also found that to meet the increase in the demand, the accounting and law firms took measures like increasing the working hours of both partners and workers. In the case of the firms that experienced decrease in demand, staffs were allowed to work less hour but there was no mention of a cut to the staff salary. Only reduction to the discretionary expenditure was stated (QuickFee, 2020).

For a certain period, Malaysia experienced the highest cumulative number of confirmed COVID-19 infections in Southeast Asia, and the spike in numbers of COVID-19. This has a negative consequence to the business such as the shutting down of businesses during first phase of movement control order, the change in the working environment, arrangement due to social distancing, and lack of demands from clients which badly affecting the businesses' cash flows.

ACCA Malaysia (2020) reported that the unemployment rate in Malaysia spiked to 5.0% as the number of unemployed persons rose to 779,000 people in April 2020. A survey by Department of Statistics Malaysia (2020) described the loss of job by industry, and the survey showed that the highest job loss was in art, entertainment, and recreation, followed by unspecified industry, property, and education. The job losses in other industries, however, were less than 10%.

The respondents in the survey by ACCA Malaysia (2020) also opined that they do not redesign the current remuneration and employment model. The firm has largely changed the working arrangements in which they allow the flexibility of the staff to work from anywhere other than the offices. In addition, more safety and health measures were put in place for all people dealing with the businesses. The flexible working arrangement was expected to be continued for a long time as the businesses were looking forward to making digital investment, not only to facilitate the remote working of their employees, but to communicate with their clients and to market their goods and services.

3. Research Methodology

This study employed an online market survey to obtain research data. The usage of online survey questionnaires had been selected as a technique of data collecting since this approach is more cost-effective, takes less time, and has the capability of reaching a large number of respondents via a variety of technological devices, such as smartphones and tablets. Statistical Package for Social Science (SPSS) was used to do analyses on the information that was gathered through the questionnaire. Several analyses, including as descriptive analysis, reliability analysis and mean analysis were conducted.

The questionnaires were developed using both historical and recent research as their primary sources of information. This study incorporates information from Venkatesh et al. (2003) that proposed the Unified Theory of Acceptance and Use of Technology (UTAUT) model to predict the system usage and technology adoption related decisions. The UTAUT model consists of a few constructs namely performance expectancy, effort expectancy, social influence and behavioral intention. This study added several other constructs to obtain richer perspective on the determinants of technology use namely attitude, self-efficacy, and anxiety.

Performance expectancy is defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance while effort expectancy is prescribed as the degree of ease associated with the use of the system. Social influence on the other hand is the degree to which an individual perceives that important others believe he or she should use the new system. The other construct, behavioural intention can be described as the desire or interest to do specific behaviours while attitude toward using technology is defined as an individual's overall affective reaction to using a system. Self-efficacy in this study refers to an individual's belief in his or her capacity to execute behaviours necessary to produce specific performance attainments and the last construct, anxiety is an emotional reaction in regard to performing a behaviour.

The survey consisted numerous components, such as information about the respondents' demographics and the variables impacting the user desire to utilise technology on the accounting and finance function to deal with the COVID-19 situation. The questionnaires used a Likert-type 5-point scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. To verify the validity of the questionnaires, the survey instrument are given to a several experts for assessment. Before the final version of the questionnaires were utilised for the data collection, a preliminary investigation in the form of a pilot study was carried out.

Participants in this research are employees that working in finance functions in Malaysia. The primary objective was to gather information on the employees' intentions to make use of technologies related to the finance function or popularly known as Fintech while the epidemic was in progress. A total of 1,000 respondents are reached using a variety of different web platforms. A response rate of 8.3 percent was achieved for this research, which resulted in 83 relevant questionnaire responses being gathered. According to the advice made by Sekaran and Bougie (2013), the sample size should be between 30 and 500 people for most research projects. The number of people in the sample conforms with this guideline.

4. Findings and Discussion

Table 1. Demographic Profiles of the Respondents

Respondent's Information		Frequency	Percent
Gender	Male	40	48.2
	Female	43	51.8
	Total	83	100.0
Age	21 - 30	16	19.3
	31 -40	44	53.0
	41-50	19	22.9
	51 and above	4	4.8
	Total	83	100.0
Education level	School and below	4	4.8
	Certificate	4	4.8
	Diploma	13	15.7
	Bachelor's degree	29	34.9
	Post-graduate degree	20	24.1
	Professional qualification	13	15.7
	Total	83	100.0
Firm/organization	SMEs	9	10.8
	Public listed company	7	8.4
	Audit firm	9	10.8

Government department & agencies	58	69.9
Total	83	100.0

Table 1 shows the demographic profile of the respondents of this study. Male and Female almost equally distributed while in term of age, majority of them come from middle age group of 31-40 years old (53 percent). For educational background, majority of the respondents have undergraduate qualification lead by bachelor's degree (34.9 percent), post-graduate degree (24.1 percent) and diploma together with professional certificate of 15.7 percent each. Majority of them also working in government department and its related agencies (69.9 percent) followed by audit firm (10.8 percent) and public listed company (8.4 percent).

Table 2. Respondents' Knowledge and Experience on Technology

Knowledge and Experience		Frequency	Percent
General computer knowledge	Poor	2	2.4
	Moderate	23	27.7
	Good	52	62.7
	Very good	6	7.2
	<i>Total</i>	83	100.0
Internet knowledge	Poor	2	2.4
	Moderate	24	28.9
	Good	49	59.0
	Very good	8	9.6
	<i>Total</i>	83	100.0
Internet experience	1-3 years	1	1.2
	More than 3 years	82	98.8
	<i>Total</i>	83	100.0
Internet usage per day	Less than 1 hour	1	1.2
	2-3 hours	6	7.2
	More than 3 hours	76	91.6
	<i>Total</i>	83	100.0

Table 2 present the background knowledge and experience on technology by the respondents. Majority of the respondents have a good general computer knowledge (62.7 percent) and also good internet knowledge (59.0 percent). In term of experience, almost all of the respondents have used the internet more than 3 years (98.8 percent) and majority of the respondents too can be classified as a heavy internet user as they surfing internet more than 3 hours in a day.

Table 3. Descriptive Results of Determinants of Fintech Adoption

No	Variable	Number of Questions	Mean	Standard Deviation
1	Performance expectancy	4	4.3434	.57343
2	Effort expectancy	4	4.1205	.61158
3	Attitude	4	4.2319	.62076
4	Social influence	4	4.0452	.61997
5	Self-efficacy	4	3.9458	.59219
6	Anxiety	4	2.9006	.89199
7	Behavioral intention	3	4.3052	.57548

Table 3 shows the descriptive results of the main study which to examine the factors or determinants that influence the Fintech adoption by the respondents. Our study find that performance expectancy is the most influential factor on why finance professional adopts Fintech in their workplace (mean 4.3434). This is not surprising as during the occurrence of pandemic, the workers do not have any option but need to ensure their job outcome does not totally stop which will drastically bring negative consequences to other process. As a person that managing the monetary and financial matters, finance professional need to find a way to ensure payment to vendor and supplier not halted while revenue and income still properly received on time. Having a proper cashflow cycle is crucial to ensure company remain solvent, sustainable and survive during the pandemic.

Behavioral intention is described as the degree to which a person has formulated conscious plans regarding whether to perform a specified future behavior (Chao, 2019). It is the most second important factors under research (mean 4.3052), meaning the finance professional in this study has a positive and direct influence of Fintech adoption. Possibly, the majority of the respondents acknowledged the important and usefulness of Fintech during the pandemic. Fintech is a powerful tool as a mechanism to facilitate accounting and finance matters via the adoption of artificial intelligence, blockchain, internet of things and cloud computing.

Attitude sit in the third most influential factors (mean 4.2319). Attitude in this study can be described as an individual's positive or negative feelings about performing the target behaviour (Davis et al. 1989). In the context of this study, it is imminent that the respondents have a positive attitude to use Fintech, corresponds with the earlier factors that indicate an encouraging result in adopting Fintech during the difficult period.

Anxiety is the most least influential factors (mean 2.9006), meaning majority of the respondents do not feel anxious, worry, unease or nervous to use fintech in their workplace. This is consistent with the result of the background of the respondents' knowledge and experience on technology which showing that they have extensive knowledge and high-level usage intensity on internet. Thus, many of the respondents do not have negative emotional reactions in regard to performing a behaviour related with fintech implementation.

Other factors such as effort expectancy (mean 4.1205), social influence (mean 4.0425) and self-efficacy (mean 3.9458) showing a positive and above average result.

4. Conclusion

The purpose of this study is to examine the current state of technology adoption by the finance professional and their determinants to adopt technology, specifically financial technology in the workplace. This study found that majority of the respondents are considered as highly experienced and heavy technology users, largely based on their usage on social media technology and possibly their experience using e-commerce transaction during movement control order. In addition, this study found that performance expectancy, behavioral intention and attitude are the biggest influence for them to adopt Fintech in the workplace.

There are few contributions to this study. First, this study has shown that it is important for the employer to convince their staff to use new technology, as this new technology will enhance not only their performance but overall organizational performance. Second, more training, such as simulation and hands-on experience, needs to be conducted so that staff can familiarize themselves with the new task or standard operating procedures. This will increase their behavioral intention and indirectly, reduce their anxiety about using new sophisticated technology. Finally, the top management needs to create a positive culture and an encouraging environment that will encourage employees to adopt new technology.

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References

- Abidin, M. A. Z., Nawawi, A., & Salin, A. S. A. P. (2019). Customer data security and theft: a Malaysian organization's experience. *Information & Computer Security*, 27(1), 81-100.
- Abhari, S., Jalali, A., Jaafar, M., & Tajaddini, R. (2022). The impact of Covid-19 pandemic on small businesses in tourism and hospitality industry in Malaysia. *Journal of Research in Marketing and Entrepreneurship*, 24(1), 75-91.
- ACCA. (2020). *Covid-19: The road to recovery?* Retrieved from ACCA https://www.accaglobal.com/gb/en/professional-insights/global-economics/Covid-19_Road_to_recovery.html.
- Alaloul, W. S., Liew, M., Zawawi, N. A. W. A., & Kennedy, I. B. (2020). Industrial Revolution 4.0 in the construction industry: Challenges and opportunities for stakeholders. *Ain Shams Engineering Journal*, 11(1), 225-230.
- Bakar, N. A. A., Deraman, Z., Tarmiji, M. F., Yusoff, R., & Kama, N. (2020). Workplace digitalization in public sector organization towards operational effectiveness: Current landscape, issues and challenges. *International Journal of Innovation in Enterprise System*, 4(1), 78-83.
- Bardhan, R., Byrd, T., & Boyd, J. (2022). Workforce Management during the Time of COVID-19-Lessons learned and future measures. *COVID*, 3(1), 1-27.
- Battisti, E., Alfiero, S., & Leonidou, E. (2022). Remote working and digital transformation during the COVID-19 pandemic: Economic-financial impacts and psychological drivers for employees. *Journal of Business Research*, 150, 38-50.
- Chao, C. M. (2019). Factors determining the behavioural intention to use mobile learning: An application and extension of the UTAUT model. *Frontiers in Psychology*, 10(1652), 1-14.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 318-339.
- Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research*, 117, 284-289.
- Karim, N. A., Nawawi, A., & Salin, A. S. A. P. (2018). Inventory management effectiveness of a manufacturing company-Malaysian evidence. *International Journal of Law and Management*, 60(5), 1163-1178.
- Lu, Y. (2017). Industry 4.0: A survey on technologies, applications and open research issues. *Journal of Industrial Information Integration*, 6, 1-10
- Marinova, D., de Ruyter, K., Huang, M. -H., Meuter, M. L., & Challagalla, G. (2017). Getting smart: Learning from technology-empowered frontline interactions. *Journal of Service Research*, 20(1), 29-42.
- Nawawi, A., & Salin, A. S. A. P. (2018). Internal control and employees' occupational fraud on expenditure claims. *Journal of Financial Crime*, 25(3), 891-906.
- Nor, N. H. M., Nawawi, A., & Salin, A. S. A. P. (2018). The impact of audit committee independence and auditor choice on firms' investment level. *Pertanika Journal of Social Sciences & Humanities*, 26(3), 1433-1454.

- Pantano, E., Pizzi, G., Scarpi, D., & Dennis, C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. *Journal of Business Research*, 116, 209-213.
- QuickFee. (2020, March-May). *Covid-19 impact on the accounting and legal industry in the United States*. Retrieved from <https://quickfee.com/covid-19-impact-on-the-accounting-and-legal-industry-in-the-united-states/>
- Rymarczyk, J. (2020). Technologies, opportunities and challenges of the Industrial Revolution 4.0: Theoretical considerations. *Entrepreneurial Business and Economic Review*, 8(1), 185-198.
- Sekaran, U. & Bougie, R. (2013). *Research method for business* (6th ed.). John Wiley and Sons, Inc. NY.
- Shahar, N. A., Nawawi, A., & Salin, A. S. A. P. (2020). Shari'a corporate governance disclosure of Malaysian IFIS. *Journal of Islamic Accounting and Business Research*, 11(4), 845-868.
- UNDP China. (2020). *Assessment report on impact of COVID-19 pandemic on Chinese enterprises*. UNDP, N.Y.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Verma, S., & Gustafsson, A. (2020). Investigating the emerging COVID-19 research trends in the field of business and management: A bibliometric analysis approach. *Journal of Business Research*, 118, 253-261.