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FINTECH AND FINANCIAL INCLUSION IN THE AGE OF COVID 19: RECAPITULATING PANDEMIC IN 2019

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ABSTRACT

Financial inclusion is a vital barometer of overall growth in any country. In the age of Covid 19, the increased number of regulations on remote instructions has hampered achieving financial inclusion. As a result, integrating financial technology (FinTech) into financial services has become a top priority in ensuring equal access to financial products and services. As a result, the focus of this study is on the perceptions of financially deprived people about the impact of FinTech on achieving financial inclusion. The self-administered survey implemented by the study reached 88 underprivileged financial service users yielding a response rate of 73.33%/ The study effectuated quantitative study design encapsulating the constituents of Technology Acceptance Theory. The conceptual model concentrated on accessibility, availability, financial usage and quality relevance as proxies for individuals' perception of FinTech in achieving financial inclusion. Firstly, the study focused on demographic profile analysis, which includes an overview of employment categories and monthly income levels. Then, the study applied structural equation modelling to ascertain the relationship between FinTech and financial inclusion. According to the descriptive study on demographic factors, the majority of the participants are self-employed and earn between 19999 and 39000 LKR per month on average. The content,

convergent, and discriminant validity tests were used to establish reliability in the study. The study's findings emphasize the predictor; technology acceptance accounts for a large portion of the variance. As a result, the findings established a positive relationship between technology acceptance and financial inclusion. Despite the fact that the current situation appears to be unfavourable, it has created a positive perception among the community, encouraging them to make changes in their financial routines. The empirical study is a guide for policymakers to strengthen the apparatus to accept technological innovations considering their immediacy, convenience, and low cost in order to achieve financial inclusion in Covid 19.

Keywords – COVID 19, Fintech, Financial Inclusion

1. INTRODUCTION

Financial inclusion concentrates on the underprivileged in order to create transparency and equity while providing financial assistance (Bansala, 2014). Financial inclusion, according to Nguyen (2020), is the systematic process of ensuring individuals have access to and the ability to use a variety of financial services in a timely, effective, and efficient manner, particularly for the financially disadvantaged group. As a result, financial inclusion confirms the responsible and long-term accessibility and affordability of a variety of financial products such as financial transactions, payments, credit facilities, savings, and insurance (Sarma, 2016; Joshi, Singh, & Jain, 2014). So, financial inclusion reinforces socio-economic benefits by creating an equitized environment for all the participants (Neaime & Gaysset, 2018).

Technological advancements have transformed the financial services industry. Mobile money, marketplace lending, peer-to-peer (P2P) lending insurance technology, and Robo-financial advice are just a few of the exciting developments in the space (Feyen et al., 2021). Over the last decade, fintech has increased retail users' access to and convenience with financial services. Meanwhile, AI and cloud computing are reshaping financial markets. To meet customer demand, a slew of new financial institutions have sprung up to capitalize on new technologies, and the majority of incumbents have stated that digital transformation is a strategic priority (Feyen et al., 2021).

Modern digitalized technology serves as a platform that extends the financial inclusion of the underprivileged people (Bansala, 2014). Evans (2018) identified three stances of technology-driven financial models namely; 1. Bank-Oriented Model: Use of non-conventional affordable channels such as automatic teller machines, internet banking and mobile banking, 2. Bank-Led

Model: Mobile applications and involvement of retail agents, and 3. Non-Bank Led Model: endorses financial services excluded by the orthodox financial model. Hence, it has raised the concern of integrating financial technology with internet content and mobile content to achieve financial inclusion (Lenka & Barik, 2018).

The rash disaster that spreads throughout the world in the first half of 2020 has caused massive damage to human life. It was first identified as a coronavirus and later dubbed Coronavirus Disease-19, or COVID-19 (Qiu et al., 2020). The virus originated in Wuhan, China's Hubei province, and has since spread throughout the world, wreaking havoc on human economic well-being. It was discovered that by mid-June, the virus had the ability to harm 8 million public lives worldwide, with 436,000 deaths being critical. Since the medications were ineffective in establishing a treatment for the disease, republics implemented several public health procedures as a preventive measure, particularly social distance while the virus spread rapidly (Fong et al., 2020). The dangerous misadventure has the potential to drastically alter people's lifestyles as well as the business environment around the world (Ho et al., 2020).

According to Nawayseh's (2020) study conducted during the COVID 19, people have faced several barriers in modern life as a result of the lockdown, which has made it difficult for people to access food, financial services, and other necessities. As a result, many governments have implemented new programs to assist pitiful individuals in making their lives more comfortable. In particular, authorities have introduced new FinTech applications during COVID 19 to assist their general public in gaining easy access to financial transactions.

Digital asset exchanges, digital payments, digital savings and WealthTech, digital banking, digital identity, and RegTech all experienced significant growth in the global context during the COVID 19 period, while digital lending saw a decrease in transaction volume. Furthermore, the market becomes more rigid during the COVID 19 period. During the COVID 19 era, emerging market and developing economies (EMDEs) reported advanced development in transaction capacity and volume, new customers and customer retention, as well as a slight increase in operational challenges, costs, and risks compared to advanced economies (AEs) (CCAF & World Bank and World Economic Forum, 2020).

In this context, consumers and the financial industry can conduct transactions in a secure manner by utilizing financial technology (FinTech) as an innovative technology (Puschmann, 2017; Chen et al., 2019). As a result, financial institutions and technological corporations are increasingly inclined to capitalize on FinTech, which generates greater volume of international benefits

(KPMG, 2019). In the study of Gomber et al., (2018) they stated that the benefit of FinTech innovations for expansion can be obtained by balancing the future outcomes and risk for FinTech. Mobile phone became the valuable technical equipment to unbanked people in using financial services specially in developing countries. Most probably people with higher knowledge about socioeconomic resources use FinTech very effectively in providing financial services using various financial product and gather financial information while others are not so (Bharadwaj et al., 2019). Moreover, the general public's reluctance to use Fintech, particularly retail financial services, is a major barrier to the maturation process of Fintech in a country, and it takes a long time to adapt and be successful (Gomber et al., 2018; Harrison & Jan 2018).

In essence, technological advancement has accelerated rapidly in the COVID 19 era. Individuals' ability, financial willingness, and technological literacy, on the other hand, are critical factors in embracing financial technology in order to achieve greater financial inclusion. In such cases, evaluating the suitability of FinTech to achieve financial inclusion contributes to financial advancement. Therefore, the purpose of this study is to evaluate perceptions of financially disadvantaged people about the impact of FinTech on achieving financial inclusion.

2. LITERATURE REVIEW

2.1 Theoretical Framework

The technology acceptance model depicts people's likelihood and attractiveness to adopt new technology, as well as their ability to accept new technological changes and adapt to those changes in their daily lives. Various factors, according to this model, influence the user's decision on the method of using new technology and the time framework for using new technology (Maranguni & Grani, 2015). People's behavioral intentions (BI) most likely cause them to use new information technology, and in other words, they accept the new improvements as a virtuous object; similarly, the degree of end-user satisfaction with that facility grounds to continuous usage of that technology (Szajna, 1996; Mathieson, 1991). A person's attitude toward using IT can influence behavioural intention, and attitudes have two characteristics; 01. Perceived ease of use (PEOU) is an individual's belief that using an IT system will be simple and smooth and 2. Perceived usefulness (PU) is an individual's belief that using an information technology system will improve professional performance (Venkatesh & Davis, 2000).

Another theory known as the theory of diffusion of innovations explains why people adopt new technology, the process of adaptation, and the speed of adaptation of new technology differ from one another in society (Aizstrauta et al., 2015). According to these theories, Fintech, like one of the major

advancements in financial services technology, generates new opportunities for individual empowerment by increasing transparency, lowering costs, and making information more accessible to the public and boosting the efficiency of the financial ecosystem. Furthermore, Fintech subsidizes a variety of alternative banking services rather than traditional banking services, resulting in the provision of clear and simple banking services to customers today (Zavolokina et al., 2016). In most cases, the internet and mobile devices, which are major facilitating partners for Fintech in providing financial services, have an impact on the development of economic activities, economic productivity, living standards, and access to social development factors (Meso & Duncan, 2002).

2.2. Empirical Framework

In recent years, financial inclusion has emerged as the most pressing development concern. Financial inclusion is a process that ensures that all members of an economy have equal access to and use of the recognized financial system's services (Raichoudhury, 2020). An encompassing all, financial system promotes the efficient allocation of productive resources, lowers the cost of capital, vastly improves daily financial administration, and aids in the reduction of the expansion of informal credit sources. According to the aforementioned viewpoint, (Evans, 2017) defined financial inclusion as a mechanism for providing final services such as savings, credit, and insurance to customers in an economically and efficiently efficient manner.

Fintech innovations have the potential to give poor people access to financial services like payments, savings, credit, and insurance. People all over the world are denied access to basic financial services, restricting their ability to escape from the pool of poverty (Demirgüç-Kunt et al., 2018). Fintech innovations are resonating to mingle ICT tools with Finance to create a better financial system (Walsham, 2012). Evidently, it synthesizes that financial inclusion can be strengthened with financial innovation. Accordingly, Fonté (2013) study in the United States revealed that mobile banking systems and mobile payment systems assist individuals to gain access to a series of financial services due to proximity and lower cost. Ghosh and Bhattacharya (2019) elucidated the concept of “SureCash “which concentrated on a range of mobilized financial services with an aim of popularizing digital financial service framework among non-bankers.

Evans (2018) investigated the relationship between internet and mobile phone use and financial inclusion from 2000 to 2006. As a result, empirical evidence established a significant positive relationship between such mobile technology utilization and financial inclusion. Similarly, Lenka and Barik (2018) discovered a link between increased mobile phone use and financial inclusion

in SAARC countries. According to Bongomin et al. (2018), social networks improved financial inclusion in Uganda through social cohesion. Moreover, Mago and Chitokwindo (2014) revealed, economically underprivileged people in Zimbabwe have embraced mobile banking because it is convenient, quick, and secure.

However, Chai, Chen, Huang, and Ye (2018) revealed that social networking through technology has a relationship with individuals' participation in unstructured and informal markets, and it has amplified the number of informal financial transactions, particularly informal household lending. On the other hand, the digital age has exacerbated the digital divide between financial service beneficiaries and financial deprivers. Hence the assimilation of FinTech to reinforce financial inclusion would increase the financial separation (Ozili, 2018). Supporting, the study conducted by Personal and Archive, (2017) ascertained a negative relationship between mobile technology and financial inclusion obtaining data over the period of 2011-2014 from Ghana.

In the age of COVID 19 technological advancement has been emphasized due to abundance of social- distancing rules and regulations. As a result, the financial sector has prioritized the implementation of modest technology to ensure the smooth operation of services. Herein, FinTech has been assimilated into financial services to achieve financial inclusion. However, the existing literature has not focused on discovering the perceptions of the economically deprived community, which must be taken into account in order to strengthen financial inclusion. Furthermore, existing research on the use of FinTech to achieve financial inclusion yields contradictory results. Accordingly, in essence the existing literature in this field is limited and fragmented. As a result, this study will bridge the gap by elucidating the perspectives of financially disadvantaged communities on FinTech and financial inclusion with the help of Technology Acceptance Theory and Theory of Diffusion.

3. METHODOLOGY

The quantitative reasoning strategy encompassed by the study is to ascertain the relationship between individuals' perception of FinTech and financial inclusion. Herein, the study concentrated on financially underprivileged service users in Uva Province assimilating the snowball sampling technique. Uva province is designated because it stands in a low per capita income stance with the Northern and Eastern Province and it has reported the lowest household expenditure consumption compared to other provinces (Central Bank, 2020). Furthermore, the poverty index developed by Asian Development Bank (ADB) (2009) presented Uva Province as an impoverished province among the others. Accordingly, 120 self-administered questionnaires were distributed

following the survey model. Thereby, the data set is examined using the SmartPLS data analysis tool, which established a path coefficient model between FinTech and financial inclusion.

3.1 Sample Profile

There were 88 respondents, representing a response rate of 73.33 percent, and the demographic characteristics of the study sample are profiled below:

Table 01: Demographic characteristics of the sample

Description	Count	Frequency
Age Category		
20-29	14	15.91%
30-39	44	50.00%
40-49	21	23.86%
50 above	9	10.23%
Gender		
Male	37	42.05%
Female	51	57.95%
Level of Education		
Preliminary education	53	60.23%
Secondary education	28	31.82%
Tertiary education	7	7.95%
Occupation		
Public Sector	16	18.18%
Private Sector	28	31.82%
Self- employed	37	42.05%
Not engaged in	7	7.95%
Income level (Monthly)		
5000-19999	12	13.64%
19999-39000	47	53.41%
39000-59000	29	32.95%
60000 above	0	0.00%

Source: Authors Estimations based on Survey Data

Females made up 57.95 percent of the participants, with the majority being between the ages of 30-39. However, the participants' education level was deemed low, with the majority of the 53 participants having only completed their preliminary level of studies. Significantly, 42.04 percent of participants have started their own businesses, while 7.95 percent have not yet started working. Furthermore, the majority were in the income range of 19999-39000. Since the study has been limited to the economically deprived population, income distribution is set at a lower level.

3.2 Operationalization

Table 02: Operationalization

	Technology Acceptance
Perceived Usefulness	A person's belief that using an information technology system will improve job performance (Holden & Karsh, 2010).
Perceived Easiness	A person's belief that using an IT system will be simple and require little effort (Holden & Karsh, 2010).
	Financial Inclusion
The Accessibility	A sound financial system should serve many financial service users while also penetrating its service among users (Nguyen, 2020). The research focuses on how people's perceptions of financial technology affect their access to financial services.
Availability	According to (Sarma, 2016), financial innovations and the financial system must be accessible to all.
The Usage	Many scholars consider the use of financial services provided by institutes and the use of financial services by individuals and firms (Ahamed & Mallick, 2019; Nguyen, 2020). However, Sarma (2016) broadened the definition of usage by claiming that it is not only the use of a financial service but the service must be fully utilized.
Quality relevance	The quality emphasizes providing financial services in accordance with financial standards (Bongomin, Munene, Ntayi, & Malinga, 2018).

Source: Authors Constructed

3.3 Conceptual Framework

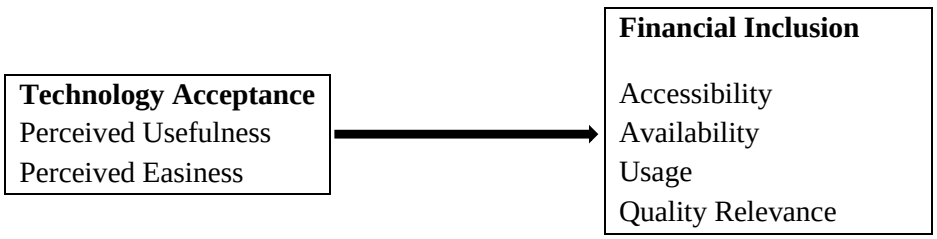

Figure 01: Conceptual Model

4. RESULTS AND DISCUSSION

The structural equation model (SEM) incorporates SmartPLS v.3 data analysis software to determine the relationship between financial technology acceptance and financial inclusion. SEM is designed and used to determine the relationships and associations between latent constructs, according to Hair et al. (2011). As a result, SEM is used in the study to test the hypothesis.

4.1 Validity and Reliability

The measurement model's reliability and validity are assessed using content, convergent, and discriminant validity tests.Convergent validity is determined by calculating Composite Reliability, the Cronbach Alpha test, and the Average Variance Extracted (AVE). According to Bacon and Sauer (1995), the internal consistency of variables is measured using composite reliability, which takes into account the reliability of latent constructs. As a result, the composite reliability threshold has been set at 0.7 and values greater than 0.7 confirm composite reliability (Bouwman et al., 2018). Table 3 ensures the dataset's overall reliability. Furthermore, Cronbach's Alpha (α) assesses the internal reliability of the latent construct (Lavrakas, 2008). According to Bouwman et al. (2018), Cronbach's Alpha (α) greater than 0.7 establishes reliability. The study's findings satisfy the test. The model's convergent validity is then confirmed using the Average Variance Extracted (AVE). Values greater than 0.5 guarantee convergent reliability (Hulin, Netemeyer, & Cudeck, 2001). When the outer loadings of each construct are greater than the other loadings, content validity is assured (Götz, Liehr-Gobbers, & Krafft; Chin & Marcoulides, 1998) It was determined that factor loadings less than 0.5 must be dropped. As a result, the standardized loadings of each item are shown in table 3, and several items were dropped from the model due to low factor loadings.

Table 3: Measurement model internal validity

		Factor Loading	Mean	SD	t-Statistics	Cronbach's α	CR	AVE
Technology Acceptance	TA_1	0.732	4.27	1.37	12.17	0.924	0.923	0.542
	TA_2	0.755	3.74	1.72	9.59			
	TA_3	0.642	3.7	1.94	7.14			
	TA_5	0.734	4.99	1.48	6.32			
Financial Inclusion	AC_1	0.840	4.45	1.85	9.57	0.857	0.865	0.528
	AV_2	0.696	3.56	1.21	13.56			
	US_3	0.778	3.51	1.78	7.68			
	QR_4	0.817	4.82	1.85	14.18			

Source: Authors Estimations based on Survey Data

Furthermore, discriminant validity is concerned with the theoretical relationship between the constructs. It held that constructs are not highly correlated with other constructs in the model (Hubley, 2014). According to Henseler et al. (2015), discriminant validity validates the model's uniqueness. The Fornell and Larcker (1981) test that measures the discriminant validity and the value concerned requires to be greater than the values of the other latent variables. Table 4 presents that study has satisfied the discriminant validity test.

Table 4: Discriminant validity

	Technology Acceptance	Financial Inclusion
Technology Acceptance	0.736	0.625
Financial Inclusion	0.643	0.726

Source: Authors Estimations based on Survey Data

4.2 Structural Equation Model

The reliability and validity test validated all of the measurement model's properties.

Financial inclusion explains 67.4 percent of the variance in the SEM model. The study's findings emphasize the predictor; technology acceptance accounts for a large portion of the variance. As a result, the findings indicate a positive relationship between technology acceptance and financial inclusion ($\beta = 0.712$, $t = 12.401$, $p = 0.00$).

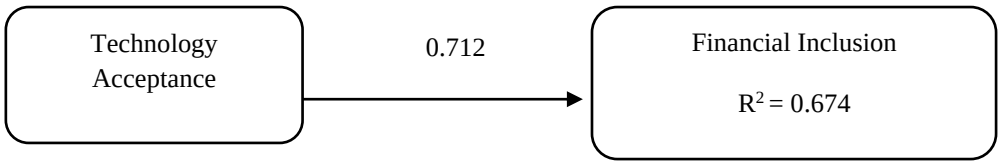

Figure 02: SEM

Cronbach's alpha and composite reliability values greater than 0.7 are used in the study to establish reliability. Furthermore, a composite reliability threshold of 0.7 has been established, and composite reliability values greater than 0.7 confirm composite reliability. Furthermore, the values of the discriminant validity must be greater than the values of the other latent variables. Finally, the study created a structural equation model to determine the relationship between underprivileged financial service users' technology acceptance and financial inclusion. As a result, the findings show that underprivileged financial service users' acceptance of technology has a significant positive relationship with financial inclusion, with coefficients of 0.712 and 0.00 probability, respectively. These findings are consistent with previous research (Evans,

2018; Lenka & Barik 2018, Bongomin et al. 2018, Mago & Chitokwindo 2014; Fonté, 2013). These studies have confirmed the positive relationship between underserved financial service users' acceptance of technology and financial inclusion.

5. CONCLUSION

The study was designed to analyze how financial technology and financial inclusion viewed the perceptions of underprivileged financial service users during COVID 19. The analysis established internal and external validity with a response rate of 73.33%. The study ascertained a positive relationship between technology acceptance of the underprivileged financial service users and financial inclusion.

As a result, the study addressed the critical issue confronting the nation during the COVID 19 era as a result of imposed distance maintaining rules and regulations. During COVID 19, policymakers and the community can develop a robust mechanism to accept technological innovations while taking into account proximity, convenience, and low cost in order to achieve financial inclusion while adhering to the remote regulatory framework. Furthermore, policy initiatives such as the National Financial Inclusion Strategy for Sri Lanka can create an environment conducive to the implementation of financial innovations that improve financial inclusion and provide adequate facilities for financial service users, particularly in rural areas. Furthermore, authorities can provide access to basic financial technology to a broad customer base in order to increase financial inclusion while avoiding generation-digital gaps.

Profoundly, inspiring the future researchers there is an emerging interest in developing a more accessible financial system, particularly through the use of digital money (Fintech) as a tool to promote financial inclusion.

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