Full Paper

Identify the Factors that Impact the Continuous Intention to Use Digital Wallets During the COVID – 19 Pandemic: An Empirical Study of Sri Lanka

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Abstract

With the rapid development of technology, cashless payments were gained huge popularity among customers. Digital wallets, as a Fintech product, facilitate their customers to do mobile banking, mobile payments, and mobile trading more conveniently. COVID – 19 pandemic hit the world of a sudden, and Sri Lanka was also severely affected by this pandemic. Therefore, the Sri Lankan government has imposed lockdowns, quarantine curfews, and other travel restrictions to maintain the social distance among the citizens. Hence most of the day-to-day activities become the online basis. People used the internet to do their daily activities because of the convenience and the safety concerns during the COVID – 19 pandemics. Due to the travel restrictions, people were not able to travel, and they had no other choice rather than to use the online facilities to do their daily transactions. This study explores the factors that can impact the continuous intention to use digital wallets as an online payment method during the COVID – 19 pandemics. To identify these factors, questionnaires were distributed among 250 people. Correlation coefficient and multiple linear regression methods were mainly used to analyze the data obtained by the questionnaires. This analysis showed that convenience, security, usefulness, and social influence have a significant and positive impact on the usage of digital wallets. According to the following findings, this research can be concluded as these four factors can directly impact the continuous intention to use digital wallets during the COVID – 19 pandemics. Finally, this study also helps the digital wallet service providers to identify the areas they have to think critically to provide a better service to their customers.

Keywords: COVID-19, digital wallets, factors affecting digital wallets, Sri Lanka, usage of digital wallets

Introduction

All the countries in the world hit severely by the COVID -19 pandemic since the first quarter of 2020. Most countries faced lots of difficulties due to the COVID -19 pandemic, and it also created many economic downfalls and financial crises as discussed by Mandalkar et al. [1]. Due to the COVID -19 pandemic, many governments impose quarantine curfews and lockdowns in order to protect their citizens from this fatal virus. Therefore, most of the schools, shops, banks, financial institutes, and restaurants were closed, and therefore, most of the people have faced lots of difficulties as discussed by Levitin [2]. Because of the pandemic, many companies and business organizations were closed, and according to the estimations, 3.3 billion global workforces are facing a risk of losing their jobs in the near future. Some of the employees have already lost their jobs due to the pandemic situation. When it comes to the Sri Lankan context, employees who worked in the tourism industry were lost many of their jobs because of the lack of tourists visiting Sri Lanka because of the COVID regulations as discussed by Herdioko et al [3].

Schools were closed for nearly one and a half years due to the pandemic situation. The banks and financial institutions were also operated with limited services, and most of the Sri Lankan banks asked their customers to use online baking facilities to o their daily transactions as discussed by Pinheiro et al. [4]. Most of the customers tend to use their credit cards and debit cards to make payments during this COVID -19 pandemic because of convenience and safety concerns as discussed by Kumar [5]. Even though most the Sri Lankan customers are not familiar with digital wallets, during this pandemic, most of the younger generation in Sri Lanka has started to use digital wallets more in this COVID -19 pandemic season. The most famous digital wallets in Sri Lanka are Dialog Genie App, Dialog eZ Cash, FriMi App, Mobitel mCash, HNB Solo App, DFCC Virtual Wallet, Upay App. These digital wallet apps are frequently used by most the Sri Lankans during the COVID – 19 pandemics to fulfill their daily transactions as discussed by Wijenandra [6].

These digital wallets provide many facilities to the customers. The customers can make their payments without using cash. Therefore, customers can shift from cash payments to cashless payments as discussed by Jesuthasan et al. [7]. It is very convenient during this COVID-19 pandemic to use these cashless payment facilities because using cash can lead to the spread of the COVID-19 virus furthermore. Using ATM machines is also not very safe during the pandemic due to the transmissions of the virus. But these Fintech payment methods are one of the best solutions to do the transactions and payments during this pandemic season as discussed by the Amaratunga [8]. By using a smartphone, any person can do their daily transactions without bothering about the safety concerns during the COVID-19 pandemic. There is no need for the customers to carry a credit card or debit card in their wallet if they can use digital wallets. The customers only have to carry their smartphones with them to install these digital apps to do their transactions more conveniently and with more security as discussed by Thennakoon [9].

Because of the COVID-19 pandemic, most people do not want to visit the banks physically. Rather than waiting in long queues for a longer period, they like to do their transactions using virtual facilities "as discussed by Premarathne et al. [10]. Most of the banks are also asked their customers to use virtual transaction methods. For example, Hatton Nation Bank has introduced an HNB solo app to their customers to do their transactions using this digital wallet facility. DFCC bank also has a digital wallet to provide a better and safe transaction experience to their valuable customers as discussed by Chandrasegaran [11]. But most of the older people in Sri Lanka still do not like to do their transactions virtually. The low IT literacy level and stereotypes are some of the major reasons behind this. But this could lead them to expose to the COVID -19 various because they frequently had to visit banks for their daily transactions (). According to the statistics issued by the Central Bank of Sri Lanka, the total usage of virtual banking facilities in Sri Lanka is lower than 15% as discussed by Gayan Nayanajith et al. [12]. During the COVID – 19 pandemics, some people started to use virtual banking facilities for the first time. The encouragement of the banks is also positively impacted the continuous intentions to the usage of the digital wallets during this pandemic as discussed by Jayasundara [13].

Research Objectives

There are two main objectives in this study. The first main objective is to increase the usage of digital wallets as a mode of electronic transaction in Sri Lanka during the Covid-19 pandemic to make it easier for people to adopt the new normal situation. The other main objective is to ensure the people are more aligned with

social norms, especially in this COVID -19 pandemic.

The market attractiveness of digital wallets is also high when compared to the traditional transaction methods. There are lots of digital wallet service providers available in the market due to the high demand as discussed by Vandezande [21]. The market size of the digital wallets has increased significantly during the Covid – 19 pandemics as discussed by Phutela et al. [22]. The market growth rate for digital wallets also rose in recent years because a new social trend has been created regarding the use of digital wallets for transactions "as discussed by Nanda [23]". Especially in the Covid – 19 pandemic most people have used digital wallets more than the earlier. Therefore, the digital wallet market in Sri Lanka has expanded during the Covid – 19 pandemics.

Experimental Section/Materials and Methods
Sample and Survey Implementation.
This study is conducted to search the continued intention of usage of digital wallets during the COVID -19 pandemic. Therefore, the data was collected during the first three months of 2021. The sample size is 250, and all of them are digital wallet users. The survey was conducted online, and the questionnaires were sent as google forms to all the selected samples by using their email addresses. Then all f their responses were taken to analyze the data.

Development and Validation of an Instrument to Measure
The questionnaires were used to collect the data. The questionnaire is designed with open-ended questions and Likert scales questions. Here the five-point Likert scale is used to design this questionnaire. (1= Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree). Here the collected data were analyzed by using the Microsoft Excel software and IBM SPSS software to get the outputs. Cronbach's Alpha test is used to check the reliability of the questionnaire. To do that, a pilot test was conducted. To analyze the demographic information, descriptive methods were used. Person correlation is also used here to examine the level of relationship between independent variables and dependent variables.

Development of Conceptual Framework
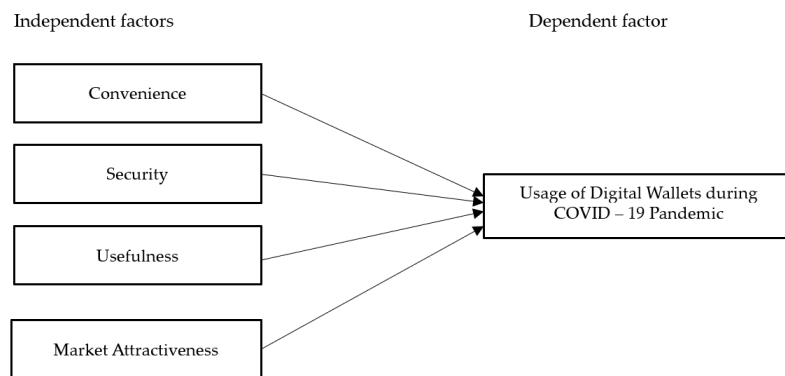
Figure 1. Conceptual Framework

The above figure indicates the independent Factors and the dependent factor of this study. There are four independent factors in this study. They are Convenience factor, Security factor, Usefulness factor and the Market Attractiveness factor. The dependent factor of this study is the Usage of digital wallets during the COVID-19 pandemic.

Results and Discussion
Analysis of Respondents' Profile
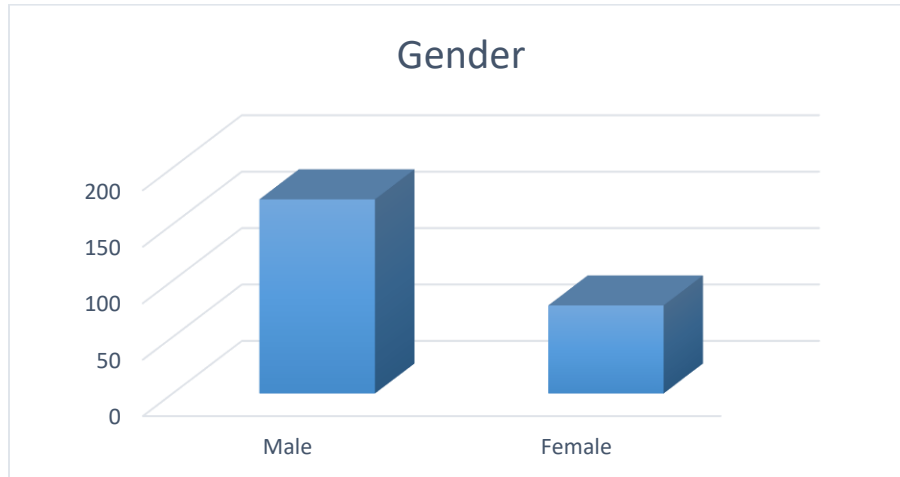
Figure 2. Gender of respondents

According to the above bar chart males who are using the digital wallets during the Covid - 19 pandemic is 172 and the females who are using the digital wallets are 78. Therefore, the males using the digital wallets during the Covid - 19 pandemic is significantly higher than the female users.
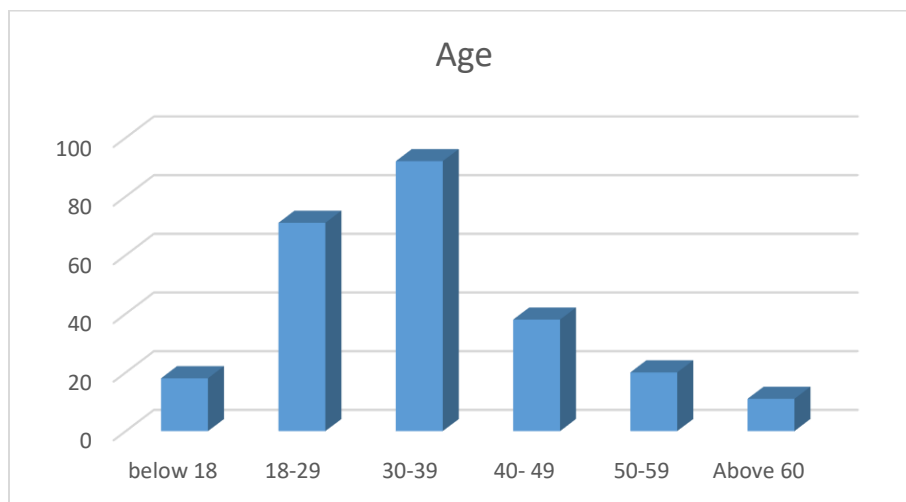
Figure 3. Age of respondents

The above bar chart indicates, there are 18 users of digital wallets coming under the below 18 age category. 71 users are belonging to the 18-29 age category. There are 92 users who belongs to the age 30-39 category. 38 users are belonging to the 40-49 age category. 20 users are falling in to the age category of 50-59. Only 11 users are belonging to the above 60 age category. Therefore, the chart indicates that age category of 30-39 are the highest number of users of digital wallets during the Covid - 19 pandemic. The second large group of digital wallet users is the age category of 18-29. The least age category who are using the digital wallets are the above 60. According to that data young people are using digital wallets more when compared to the older age categories.
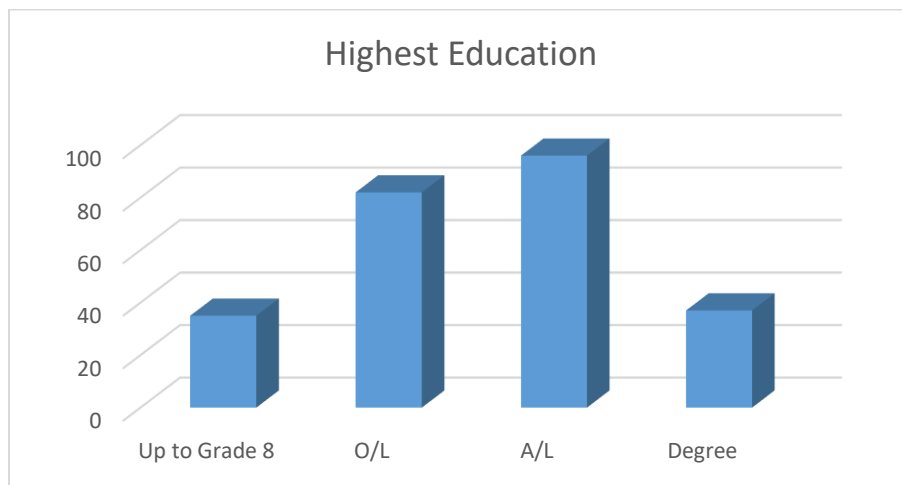
Figure 4. Highest Education of respondents

According to this bar chart, 35 of the digital wallet users have attended school up to grade 8. Among all, 82 of the digital wallet users have O/L qualifications. 96 of the digital wallet users have the A/L qualifications. 37 users of the digital wallet users obtained a degree. This bar chart depicts that most of the people using the digital wallets are having sufficient education. Therefore, people who are educated has more tendency to use digital wallets during this pandemic season.
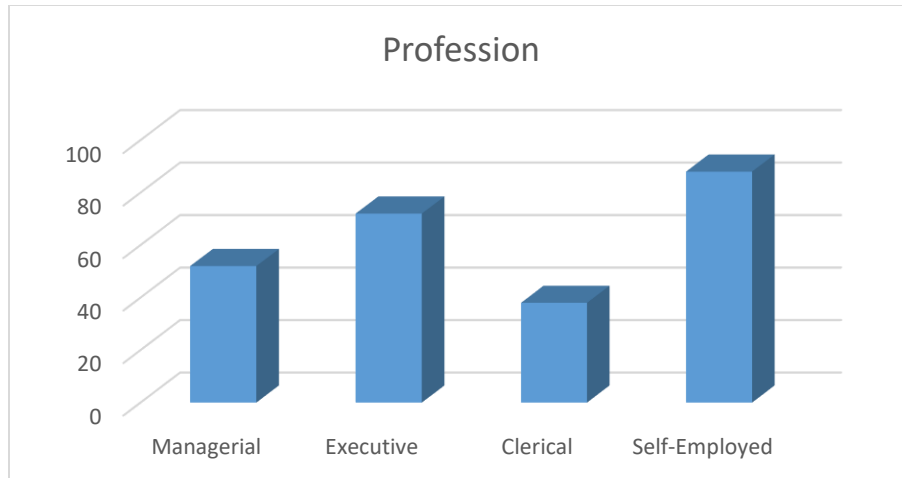
Figure 5. Profession of respondents

According to the above chart self -employed are the highest number of users of the digital wallets during the Covid - 19 pandemic and the value is 88. The executives are the second largest group of users and that value is 72. Among all the digital wallet users, 52 of the Managerial level employees are using the digital wallets. Clerical are the least group of users when comes to the digital wallet usage during the pandemic and that value is only 38. Therefore, people who are self-employed and having high income bear a more tendency to use the digital wallets during the Covid - 19 pandemic.

Analysis of Data

Table 1. Reliability Test

	Cronbach's Alpha Value
Convenience	.687
Security	.611
Usefulness	.703
Market Attractiveness	.702

According to the above table 1, Cronbach's Alpha coefficient values are above 0.6. this means that all the four factors in this survey can be considered strong. Therefore, these measures are consistent and can be used to conduct this survey successfully. The validity test is used in this study to assess the data.

Table 2. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.886
Bartlett's Test of Sphericity	Approx. Chi-Square	302.700
	df	6
	Sig.	.000

The table 2 indicates the Kaiser-Meyer- Olkin and Bartlett's test. According to the table, KMO value is equal to 0.886. it means that there are sufficient inter-correlations among the variables. Bartlett's test of Sphericity

is significant in here. Chi-square value is equal to 302.700, p<0.01. according to these results the constructs are valid.

Table 3. Test of Collinearity

Coefficients ᵃ			
		Collinearity Statistics	
Model		Tolerance	VIF
1	Usefulness	.772	1.295
	Market Attractiveness	.842	1.187
	Convenience	.770	1.298

The relationships between the factors and the statistically significant among the factors are described by the Pearson correlation coefficient. In this study the four factors are usefulness, market attractiveness, convenience and security. The statistically significant of these four factors can be easily examined by using the Pearson correlation coefficient. The multi collinearity of the variables can be checked by using the values of the following table. The maximum VIF value should me less than 5.0. otherwise there is some problem regarding the multi collinearity of the variables. According to this table all the VIF values are lower than 2.0. therefore, these variables have enough multi collinearity. When considering about the tolerance value of the following table, they are form 0.770 -0.842. Therefore, the tolerance values are less than 1.0 and therefore these values have no issues with the multi collinearity.

Table 4. Correlation matrix

Correlations		Convenience	Security	Usefulness	Market Attractiveness
Convenience	Pearson Correlation	1	.459**	.434**	.338**
	Sig. (2-tailed)		.000	.000	.000
	N	250	250	250	250
Security	Pearson Correlation	.459**	1	.428**	.707**
	Sig. (2-tailed)	.000		.000	.000
	N	250	250	250	250
Usefulness	Pearson Correlation	.434**	.428**	1	.335**
	Sig. (2-tailed)	.000	.000		.000
	N	250	250	250	250
Market Attractiveness	Pearson Correlation	.338**	.707**	.335**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	250	250	250	250
**. Correlation is significant at the 0.01 level (2-tailed).					

According to the above table 4, The Pearson correlation coefficient between security and convenience is equal 0.459. the p value between the security and convenience is equal to 0.000. This value is less than 0.05. Therefore, these two variables have a significant association. According to the following table The Pearson correlation coefficient between usefulness and security is equal 0.28. The p value between the usefulness and security is equal to 0.000. This value is less than 0.05. Therefore, these two variables have a significant association. Likewise, these variables have a positive and significant association with each other.

Table 5. Regression Analyses and Hypothesis Testing

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.265	0.453		5.005	.000
	Convenience	.32	.081	.347	3.945	.000
	Security	.211	.061	.291	3.466	.001
	Usefulness	.013	.056	.017	.234	.016
	Market Attractiveness	.211	.209	.069	1.009	0.315

a. Dependent Variable: Convenience

- According to the table P value of the Convenience variable has a significance level of 0.000 since the value of less than 0.05. Therefore, hypothesis is accepted that the Convenience factor has significant positive impact to the usage of digital wallets during the COVID – 19 pandemics.
- According to the table the P value of the Security variable has a significance level of 0.001 since the value of less than 0.05. Therefore, hypothesis is accepted that the Security factor has significant positive impact to the usage of digital wallets during the COVID – 19 pandemics.
- According to the table P value of the Usefulness variable has a significance level of 0.016 since the value of less than 0.05. Therefore, hypothesis is accepted that the Usefulness factor has significant positive impact to the usage of digital wallets during the COVID – 19 pandemics.
- According to the table P value of the Market Attractiveness, variable has a significant level of 0.315 since the value of greater than 0.05. Therefore, the hypothesis is not accepted that the Market Attractiveness factor has no significant positive impact on the usage of digital wallets during the COVID – 19 pandemics.

Conclusion

According to the above findings, most customers tend to use digital apps because of their convenience, security, and usefulness. When discussing furthermore about these factors the convenience plays a vital role here. People can easily use their mobile phones to do their transactions while they are in their home, office, or even they are traveling. They do not have to wait in the ques of the banks anymore to do their transactions. This saved the time and traveling cost of the customers. When considering the security, these digital wallets have advanced security features, and therefore it is very hard for a hacker to break down the security system of these apps. Therefore, the customers can use these digital wallets without worrying that

a third party will be intimidating to their accounts. The usefulness factors also significantly impact the usage of digital wallets during this COVID -19 pandemic. Especially during this COVID – 19 pandemic usages of the digital wallet is very useful to maintain the social distance among the people. Customers can do their transactions easily without traveling from their houses. Therefore, digital wallets are very useful Fintech products during this pandemic. But according to the above finding, the Market Attractiveness has no significant impact on the usage of digital wallets during the COVID – 19 pandemics. Peoples' attitudes and perceptions do not impact the usage of digital wallets among Sri Lankan customers during this pandemic.

Conflicts of Interest

There are no conflicts of interest declared by the author.

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Appendix.

Identify the factors that impact the continuous intention to use digital wallets during the COVID ‑ 19 pandemic: An empirical study of Sri Lanka. – Questionnaire.

This research is conducted by the researcher to identify what are the factors affecting the continuous intention to use digital wallets during the COVID ‑ 19 pandemic in Sri Lanka. The information in this questionnaire is only taken to the research consideration. This questionnaire will take 7 minutes to complete.

*Tick the relevant box.

<u>Gender</u>

Male ☐   Female ☐

<u>Age</u>

below 18 ☐

18-29 ☐

30-39 ☐

40- 49 ☐

50-59 ☐

Above 60 ☐

<u>Highest education</u>

Up to Grade 8 ☐

O/L ☐

A/L ☐

Degree ☐

<u>Profession</u>

Managerial ☐

Executive ☐

Clerical ☐

Self-Employed ☐

*Select the appropriate answer for the following questions using the given scale and circle the relevant box

1.Strongly Disagree. 2. Disagree. 3. Neither agrees nor disagrees.

4. Agree. 5. Strongly agree.

Q1- Q4 - The Convenience

Q1 Do you like to carrying money often when shopping

Q2 Have a smart phone to access to the digital wallets

Q3 Like to use digital wallets to pay the bus and train fare

Q4 Have enough signals to access to the internet

Q5- Q8 - Security

Q5 Using money is safer than the digital wallets

Q6 Digital wallets have security issues

Q7 Password and other confidential data can be revealed to a third party

Q8 There can be integrity issues with the digital wallet service providers.

Q9- Q12 – Usefulness

Q9 Easy to manage the digital wallets

Q10 Provide better shopping experiences

Q11 Can use while travelling

Q12 Easy to use and seamless

Q13- Q16 – Market Attractiveness

Q13 Lots of service providers are available

Q14 There is a new trend of using digital wallets.

Q15 Market growth rate is high for the digital wallets.

Q16 Have a significant market size for the digital wallets.

Thank You.