# Adoption E-Wallet for youth without losing it's sustainability.

T.S.J. De Silva and Professor S. Vasanthanpriyan

Department of computing and information system.

Sabaragamuwa University of Sri Lanka

# **Abstract**

E-wallet known as electronic wallet is a software-based information system which provides paperless transactions for their users in easier. The utility of e-wallet is same as credit or debit card. There are many advantages by using the E wallet. E-wallet allows its customers more advantages than the other payment modes such as, reducing fraud, online shopping, online banking, receive rewards

we can easily purchase items for lower costs. This research's main purpose is to create set of knowledgeable force to increase the economy of the country. As well as give an insight for traditional people to come out of their traditional frameworks and who thinks that the lifestyle is very easy with simple behavior patterns.

Key words: customer intention, customer satisfaction, sustainability, adoption of customers

# Introduction

As we all knew e-wallet is a paperless without transaction mechanism physical cash. E -wallet latest payment and business method for the busy people who wants negotiate at all the time. With the urbanization and changing lifestyles not only the adult even a small child has no time to waste by waiting in the long queues. And also, customers have to pay a considerable time to find goods and fair retailers to buy products. But e wallet allows its customers more advantages than the other payment modes such as reducing fraud, online shopping, online banking, receive rewards and trim wallet. And also, we can easily purchase items for lower costs. In other hand as seller and the buyer are not physically seen by face to face even enemies or strangers can exchange product and services. Up to now I have discussed the advantages of this payment method. This research's main purpose is to create set of knowledgeable force to increase the economy of the country as well as give an insight for traditional people to come out of their framework and get up from their dreams who thinks that the lifestyle is very simple with primary behavior patterns.

Starting to adopt e-wallet is actually a huge opportunity to enhance collaboration with global business people which introduce new designs, models and innovative ideas to local people. We should have an ability not only attract customers of e-wallet but also sustain them with high demands. As a third world developing country, we should have to improve a lot of technical IT based systems although Sri Lankan people have high literacy knowledge. If we work hard by guiding them from start to end like creating accounts, installing apps, to make huge crowd. Then we can keep the wallet as common payment method. We have to spread the concept with top level business owners. Then they make strategies with discussing with experts to map the path to add the Ewallet transaction mode as an extra feature. As a lot of people are going like stray cattle in their life time without a plan and study, our attempt is to give a better solution in a particular side.

# Purpose of the study

The purpose of this study is to give an opportunity for unemployed merchants through E-wallet. And also, informing people on how to negotiate with e-wallets by choosing essential products and services without wasting capital. In the other hand it is a good opportunity to arise business opportunities for customers with low shipping costs and enormous business environment. protect sustainability by finding more sponsors and consumers, avoiding misguiding of fake merchants. enhance the economy of youth by stimulating

them, improve self-learning of people especially for elderly customers as they are more traditional improve customer satisfaction are the expectations of this study.

# **Research Question**

After the studying of past research reference papers, It can be seen some research gap between real world digital industry problem with the research methodology.

After listing out some common problems of the research, they are,

- Unemployment.
- Lack of awareness of digital resources.
- Non-educated people
- Proper information is not reach on time.
- Lack of sponsorships.
- Competition
- Security issues

According to existing problems the research questions are designed to find a solution.

- 01)What are opportunities provided by E-wallet for unemployed people?
- 02)How to improve ease of use of customers?
- 03) How to overcome security issues?

04)How to protect sustainability of users?

# Significance of the study

In this study have focused on some gaps between the researches and the current E-Wallet application. This is an attempt to decrease even small space which making a barrier to adopt the E-Wallet applications. One of tasks are creating a model for attracting more financial collaborations towards the E-Wallet application. Financial parties can be defined asBanks, fintecs, telcox, Fiancial service provisers, retailers, non financial market players. The goal is to integrate those parties to have a perfect business model to improve the offers provide by those parties. Then the first question of my research will be solved. Although there are a lot of researches are conducted on this subject, there are no more solutions for common problems. The abstract problem providing ease of use to customers in Sri Lanka. The main problems are low strength of the wifi connection, lack of capital to invest, lack of user education can be solved providing suitable solutions for the according parties. When we

# **Definitions**

#### Ease of use

Ease of use is a basic concept that how easily users can use the products.

#### Perceived usefulness

Perception of users where they believe that using certain technologies can improve the performance of their work.

#### Customer satisfaction

A measurement that determines how happy customers are with a companies products or services and capabilities.

#### Social influence

A process by which an individual's attitudes, beliefs or behaviors are modifies by the presence or action of others.

#### Delimitations

Connection strength is very low in Sri Lanka as we not wish like that.

There have considerable adult E-wallet users.

Unemployed mobile wallet users are greater than employed users.

### Limitations

Technical problems (connection failure, apps down, maintenance) It causes reckless spending E-wallet availability depends on the type

## **Assumptions**

Users are not get nasty with the E-Wallet. E wallet provide only seamless products and services.

# **Literature review**

By analyzing previous research papers, we could have a satisfied context of the e-wallet and the related areas. In this phase I have mentioned summery and core of the sorted

research papers from the definition of E-wallet to customer satisfaction. The details of selected papers a s follows.

Dr.Lokinder (2009) conducted a systematic literature review to find the usage of E-wallet, customer satisfaction and also the risk factors effect for E-wallet. It has included previous research papers not recognized flexibility and sensitive data designs. The sources of data collection are gathered by conducting a survey. By analyzing the statistics, the researcher has got clear understanding about contemporary issues of society.

Chauhan Penal (2013) conducted a systematic literature review to emphasis successful factors of E-wallet are security transaction and the easiness of the use. He clearly shows the importance of the interoperability and standardization.

Sohil (2018) shows the relationship between e wallet and crypto currency. The internet banking using credit or debit card and transfer of mobile money clearly structure for those who have no understand on how to use this

Dr. N.Kuruwitaarachchi (2020)conducted a systematic literature review by focusing on the modes of e-wallet transaction. Th major methods are Quick response and Near Field Communication methods. The main purpose of this research leans to compare with foreign e-wallet users Lankan e-wallet between Sri Subsequently he has shown convenience and availability provided to the customers. This research criteria have categorized the user perspectives into two methods. They are Expectancy Performance and effort expectancy. These two factors allow to

measure behavioral intention to E-wallet users.

Gaukharmy argimbayera (2020) conducted a systematic literature review on Abhudabi National Oil Customer reaction to addict E-wallet payment. And also, the companies research clearly explain the necessity of its product services for customers in a high position according to the calculations.

Yi-Hong Li (2012) conducted a systematic review on a practical application of E-wallet in clinic sector. This is a unique research because it emphasized importance of the IC stored value card to pay medical fees. According to researcher's point of view thai pay which means the name for e-App follows a technological acceptance model. They are perceived easefulness, perceived usefulness, attitude towards using technology, theory of reasoner actions.

Reference	Goal	Research	
		questions	
Lokinder (2009)	Examine	q1: What	
	the use of	priority	
	e-wallet	risk factors	
		influence	
		you?	
		q2: What	
		are the	
		reasons to	
		use mobile	
		wallet?	
		q3: Is it	
		practical to	
		be	
		digitalized	
		of all	
		transaction	
		?	

Chauhan (2013)	Measure perceived trust	q1:What social factors influence to make you trust? q2: Are you satisfied with the security?
Sohil (2018)	Popular crypto currency among people	q1: Do you need digital currency in future? q2: Is it trustful? q3: what are the advantages of usage?
Kuruwitaarachc hi (2020)	Explose digital transactio n methods among youth	q1: Have you ever taken rewards by using E-wallet? q2: Is it cost effectful? q3: Can you do multi payments?
Gaukharmi(202 0)	Secure online transactio n	q1: Can customer enter request correctly? q2: Have they enough knowledge to use e-

		commerce ? q3: Is it strong security mechanis m
Yi-Hong Li	Investigat e the demand of E- wallet applicatio n	Q1: what are the needs for adopting E-wallet? Q2: can it easy do transaction? Q3:is it easy to use?

Table 1: Literature summery

# Develop and validate the review protocol

For doing my research Kitchenham and charters method(2007) have followed. Furthermore, in this chapter explanation of the review gained by sorting the necessary documentation is focus.

## The elements of the review

We planned this review by initiating research questions according to the purpose of the research. First, I have mentioned purpose, research questions, inclusion and exclusion criteria, search strategy, quality assessment, strategy extraction, synthesis and reporting. Following I clearly mention these steps.

According to the review the researches have given high priority to customer satisfaction. To get customer satisfaction, we should see the users perceived ease of use and

effectiveness of the use are increasing in a favorable manner. As defined in e-wallet based researchers. Sri Lanka like third world country has minimum E-wallet users because of technical problems.in rural areas even we can't connect strength to the internet well. So, the researchers (A study on finding the factors, Hidering the use of digital wallet) has assume that the connection strength is as same as Colombo when they take statistics for their calculations. Therefore, one of the main goals of this research is to formulate a lot of signal towers all over the country to stimulate the people who want to be changed.

Electronic databases IEEE

ACM Digital Lib SpringerLink ScienceDirect ResearchGate

Searched Items
Journal, Workshops

Conference Papers,

Searched applied Key words, Title As there are a lot of researches available in the internet

Language English

Publication Period From January 2000 to December 2020

Figure 1: Searching Criteria

# The mobile wallet

E-Wallet known is electronic wallet is a mobile embedded software applications which provide transaction services in many platforms such as bank sector, digital marketing sector, telecommunication sector and etc. although these applications provide enormous help for the people, there is a problem that why people are lazy to inherit for these applications. And also, this researches aim is to give an analysis of the subject of the Electronic-Wallet. As well as this research's aim is to give an insight people those who are fascinating with new innovative trends.

With the changing lifestyles of people because of the social factors like pandemic situations, people felt that it is better to have a method for transactions without going outside and multitasking payment way. By taking the maximum utilization from E-Wallet people can minimize a considerable wasting time for doing these tasks.

There are three types of e-wallets. They are closed, semi closed and opened.

Closed wallet: A closed wallet is a mobile wallet designed for making payment fully or partially by wallet issuer. A closed wallet does not support for third party providers and money transfer.

Semi-closed wallet: semi closed wallet allows selected users to make transactions. In here vendors have to agree to a agreement with the E-Wallet issuer.

#### Open wallet:

This wallets are given by banks. The users of this wallet can transfer money, purchase goods and services and money transfer through it.



Figure 2: types of models

#### Functions of the E-Wallet

The functions of the E-Wallet can be described as follows. It is actually as same as a credit or debit card.

They are,

- It secure downloading applications, registration and accessing.
- It secure user's credentials.
- It protects customers sensitive data
- It allows preselection methods.
- It can store heterogeneous sources funding.
- Supporting of loyalty programs.
- It provides fully detail of the transaction.

The E-Wallet provide different types of delivering methods.

NFC: NFC wallet consist tokenized feature. And also, it embedded to a device and host card emulation.

QR code: people can use QR code or bar code for the POS terminal and the customer's phone.

Digital only: it is designed for only online users. This type of models does not interact with the physical world.

Text-based: this is a short message service based application. It functions go in a sending device or POS terminal. For these transactions there is no need to expensive devices it only requires a device which can send a message.

### Architecture of the Electronic Wallet

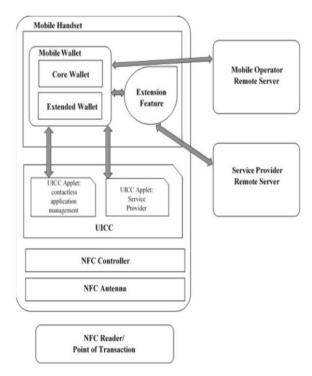


Figure 3 : Architecture of a mobile wallet

Above image shows one of the delivery modes of mobile wallet payment architecture. The main purpose of presenting this image is to enhance the **customer intention** and **user education** of the E-wallet. This wallet has two remote servers. They are mobile operator remote server and the service provider remote server. And also it include NFC controller and NFC Antenna.

## Security concept in E-Wallet

The security provide by E-Wallet is amazing. Because it has so many encryption methods and newest technology methodologies to prevent from the unknown attacks. And also it has used so many algorithms to protect the users and service providers of the E-Wallet. some of the facilities of the E-Wallet are, Provide encryption technology.

The majority of service providers use 128-bit data encryption technology to encrypt their E-Wallets. The encryption method is occurred convert plain text into the cipher text.

#### Password protected

To prevent access the unknown parties, software applications have presents password protected method. For the consumers it is like a blood of the body. It is essential for those who are interact with business parties. As bank accounts, medical databases, car insurance, bill payments link to the application there should add a strong password to protect the E-Wallet application.

## Act as a proxy

E-Wallet does not allow to access anyone to get wider private details. It only credited the funds of the accounts with the default information the user are given to the verification of their identity.

#### Limited risk

If some one loses his device who installed all the app through it. He or she might not be scared because the companies can hold your account not to make payment for unauthorizes parties when any issue happened.

### Accountability.

The E-Wallet applications allows complete traceability for all their transactions. And the transparent of the payment can be seen at anywhere and anytime.

Next we should know what are the possible threats we would face in various ways.

#### User threats

Phishing attacks: mobiles have all the information of the customers which allows to a specific attack. This attacks can be come with user emails.

Social engineering: in social engineering user information are stored in the public domains. This data can be stolen or misuse for the fraudulent payments.

Mobile OS access permission: users provide permission to access to the operating system. Attackers take advantages from it to change the content of the software's sensitive data.

# Possible security measures Security awareness Use private WIFI networks User education

#### Device threats

Unauthorized access for mobile devices:

If a device has stolen attackers have an ability to break up the security and control the software. And also, they may take fingerprint details to take the access as login to system.

## Installation malware

In the installation process there can be attached a malware with apps.

### Mobile as target

Most of the time attacker aim is to back mobile devices as they can easily achieve break down of private information. The attacks can come as fraud transaction, spyware.

## Implementation issues

Newly developed software makes some issues because they are not tested clearly. They will come some bugs.

## Possible security measures

PIN lock

Remote device lock

## Application threats

Tampering the mobile applications and the use of rootkit.

An attacker can choose as a backdoor as a login detail to control the server. And also, he can download and upload data to user applications in own way.

#### Possible security measures

Adopt secure code Integrity source code protection Takedown rogue application

#### Merchant threats

Uploading malware (POS) on the POS contactless payment terminal:
Once install POS

Man in the middle attack against POS contactless terminal and POS server: Attackers spoil network security and lack of firewall.

Payment service providers threats:

Compromise of software running on terminals: Payment service providers supply terminals for mobile payments.

Compromise payment gateway:

Payment gateway represent a gateway for attackers which seek to follow a data

Sri Lankan E-Wallet types



Figure 4: Genie logo

#### Genie

Genie is a digital wallet which store credit/debit card details, bank details and also the ez cash details to a single app to the smart phone. And also, we can pay any bill payment or reload in one tap.

Services
Merchant payment
Digital payment
Credit / Debit card details hold



Figure 5: eZ cash logo

ez Cash ez cash has market share. A lot of people in Sri Lanka use this app.

Services
Internet payment
Utility payment
Bill payment
Money transfer



Figure 6: m cash logo

## Mcash

It is a smart app for the smart life. It has it's own utility and insurance payment in a flash. It is an instant solution to pre- paid and post-paid customer of mobile.

Pay mobile bill
Pay utility bill
Transfer fund
Pay for goods at mCash merchant points.



Figure 7: Frimi logo

#### FriMi

This is a Nations Trust Bank Launched system. Users can access bank accounts using fingertips. It enables NFC and QR code payments.

Services Send money Fund transfer Pay bill

# Methodology

This chapter focus on how theoretical framework apply for our country analysis. And also, how this framework process to make a research framework.

### Theoretical framework

Fisbein & Ajseen researchers develop the framework Theory of reasoned action. According to this model of intention of behavior present as a proximal cause. Any idea is come to keep the behavior factor is good for the communication side of the E-Wallet. under the technology sector human understanding the behavioral complexity enhance the new creators as to calculate the user domain. For that in (2016) Aydin and Buyner has presented a model to identify that what are the important factors to have an intention to the E-Wallet.

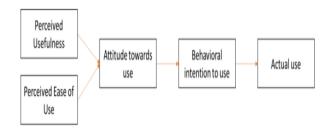


Figure 8: theoretical framework

Follow image shows a research framework to by analyzing the research papers.

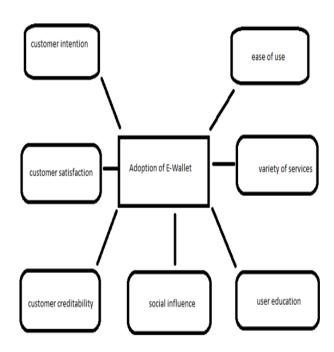


Figure 9:Research framework

#### Perceived usefulness

The perceived usefulness is the person think that the system provide useful service the level he expect.

#### Perceived ease of use

The ease of use believes that the system is free of effort in a good condition. According to the (Davis,1989) explanation the people are willing to use user friendly applications.

#### The user education

The fluency of the working field is the user education. He experience in technology give people to increase their utility of the service time.

#### Social influence

According to the Ajsen and Fishbein(1975) social pressure is the point to measure the engagement or engagement of the service. The opinion of the people depend on the family, friends, used medias, celebrities and the communication domain.

#### Variety of services

Integration one or more payment services into one mobile wallet. E-Wallet provides various funds and general functions.

#### Customer satisfaction

This determines that how customer satisfies with specific product or service and capabilities. Customer satisfaction information help to change tier existing functionalities.

#### Customer creditability

The favor of the customer is to take the risk to complete the demands on the hopes to the service providers.

#### **Customer intension**

Intention is the latest behavior cause which refers to the probability that a customer like to engage in a given behavior. To intense

something to a person there should have a good qualities in a existing system.

## These are the empirical view

This chapter contains the empirical details of the research. The analysis is done in a questionnaire. This questionnaire is consisted four main parts. The first part is included the demographical information.

#### 1. Question 1,2,3 and 4 Demographics

Demogr	Value	Percenta
aphic		ge
Gender	Male	53.3%
	Female	46.6%
Age	Under 16	4.44%
	16 – 20	7.77%
	20 – 25	28.88%
	25 - 30	58.88%
Ethnicit	Sinhala	75.55%
У	Tamil	16.66%
	Muslim	5.55%
	Burger	2.22%
	Other	0%
Connect	Yes	76.66%
ion	No	7.77%
strength	May Be	15.55%

Table 1: demographic 1

Above table shows the basic information of the respondents to gain the idea that how to distribute the demographical information. Among them 48 are males and 42 are female. The contribution people most have the age area between 25-30 with the percentage of 58.88%. And also every type of ethnicity are contributed

to this survey. Among them 68 are Sinhalese, 15 Tamil, 5 Muslim and 2 Burger.

One of the issues of Sri Lankan people are the problem of connectivity. There is some lack of strength in connection in several places. To find out a solution we should have a good understanding on the places where do not have a connection.

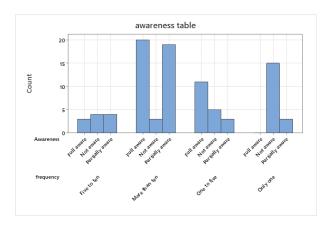
To establish the software application, we should have requirements to fulfill the activation. In here we should check whether the respondent have basic literacy knowledge. The requirements are

Knowledge in IT and English, Money, Bank account, device are the primary things we should have to consider. Following are the details how respondents are distributed.

		1	
Demogr	Value 1	freq	percen
aphic		uen	tage
		су	
School	0 – 50000	21	0.23%
educati	50000 - 100000	7	0.07%
on	100000 – 150000	1	0.01%
	above	10	0.11%
		0	0%
		0	0%
		0	0%
Bachelo	0 – 50000	14	0.15%
r Degree	50000 - 100000	18	0.2%
	100000 - 150000	6	0.06%
	above	2	0.02%
		0	0%
		0	0%
		0	0%
Master	0 – 50000	0	0%
Degree	50000 - 100000	2	0.02%
	100000 - 150000	3	0.03%
	above	2	0.02%
		0	0%
		0	0%
		0	0%
Phd	0 – 50000	0	0%
	50000 - 100000	0	0%
	100000 - 150000	0	0%

	above	1	0.01%
		0	0%
		0	0%
		0	0%
Other	0 – 50000	1	0.01%
	50000 - 100000	1	0.01%
	100000 – 150000	1	0.01%
	above	0	0%
		0	0%
		0	0%
		0	0%

Table2: demographics



Graph 1: awareness 1

Part 2 is driven to the customer awareness towards the e wallet.

Under the second part first question move to know the uncertainty incident of the people. When we face to an urgent situation what is come to help. I think many times help phone to people in the urgent situations.

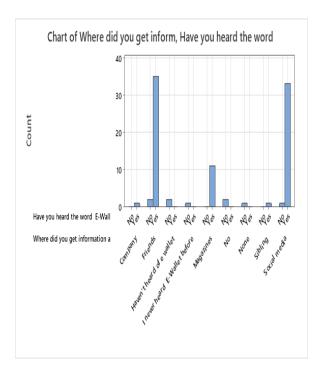


Graph 2: measuring uncertainity graph

It proves in the survey. There are 72 respondents accept the situation and only 18 people have commented in negatively. After that I want to know how to spread the name e-wallet among the society. And the medium gets the information about E-Wallet. There are 34 responses coming from social media. 37 responses coming from the friends. 11 magazines published response of the E-Wallet. And also, 8 responses are taken from the other sources.



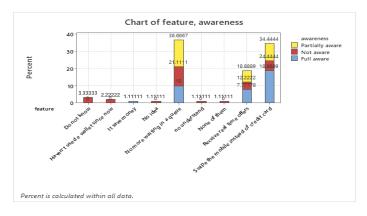
Graph 3: customer got information graph



Graph 4: awareness of information gathering

Above graph describe the count of the information gathering sources by users and the non users. Most of the communication method is hearing from friends. The other one is Social media. If we have n idea to introduce and distribute the e-wallet applications according to that survey the better options are friends and social media platforms.

The next question is driven to the awareness of the customer. According to my survey 34 members give the comments on the awareness of them for e-wallet is full. And 29 members have voted for the partially aware option. And there are 27 considerable members who are not aware of the functionality of the e-wallet.



Graph 5: awareness with e-wallet features

The diagram represents the percentages on how respondents like to the features of the e-wallet.

Full aware: swap the mobile (18.88%)

No more waiting in a queue (10%) Receive real time offers(7.77%)

It saves money(1.11%)

Partially aware:

No more waiting in a queue (36.66%) swap the mobile instead (34.44%) Receive real time offers(18.88%)

Not aware: swap the mobile (24.44%)

No more waiting in a queue(21.11%) Receive real time offers(12.22%)

Do not know(3.33%)

Have not use a wallet(2.22%)

Other(3.33%)

To use a product or service we should have a specific benefit than the other modes. Most of the people think (39 respondent) time saving is a one of benefits they have. 30 respondents said that ease of use the best option to use the E-Wallet. 19 students think that security is the best feature of the e-wallet. As well as 8 respondents have other options.



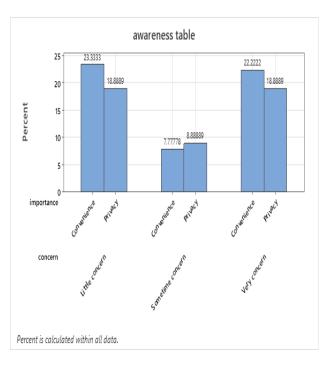


Graph 6: usability of E-Wallet

Some people cannot do business negotiations without using E-Wallet online payment methods. Because it is more familiar to employees fulfill their requirements. The purposes to use this kind of wallet is differing. In here we are mentioned four purposes. They are money transfer, Bill payment, recharge and ring tone purchase. There are 34 respondents use e wallet to money transfer. There are 42 respondents use e wallet to bill payment. There are 11 respondents use e wallet to recharge. And there are 3 respondents use e-wallet to ring tone purchases.







Graph 8: security measurement

This is the part 3 evaluation. The title security.

After that this question check whether the security protection installed. There are 43 respondents installed an antivirus software. And there are 26 respondents installed firewall application. Then 7 people have installed adware. And the 14 respondents are installed security protection in other methods.

If there is occurred any attack when installing the software there should be options to overcome the problems. As solutions they choose user education, limiting online activities, installing antivirus software and self-awareness of the security. There are 18 respondents choose user education. There are 27 respondents choose limiting online activities. There are 30 respondents choose installing antivirus software. There are 15 respondents choose the option self-awareness in security.

The next question is driven for the carefulness of the customers in online paying. 9 respondents have excellent, 49 respondents have very good carefulness 24 respondents have good respondents, 6 have fair respondents and 2 have bad respondents.

The encryption of the security of the e-wallet can be enhanced with the following rules. The acceptance of the respondents has gone as follows.

There is the average of 3.93 accept to formalize new laws.



Figure 10: new laws establishment

The establishment of key escrow encryption has accepted the average of 3.62.



Figure 11: key escrow encryption

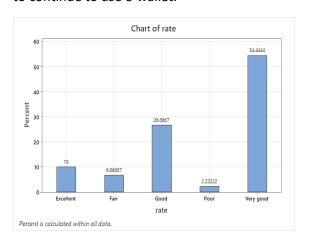
The release of private details to the third party is gone the average.



Figure 12: third party release

The forth part is gone with the customer satisfaction. 16 respondents have very satisfied. 56 respondents have partially satisfied.15 respondents are neutral. 2 respondents are partially unsatisfied and 1 respondent is very unsatisfied.

The likely to continue using e-wallet is driven with 13 are very unlikely. 64 respondents are in likely condition. 10 respondents are in neutral condition. 2 respondents are in the unlikely condition. And also 1 respondent is very unlikely to continue to use e-wallet.



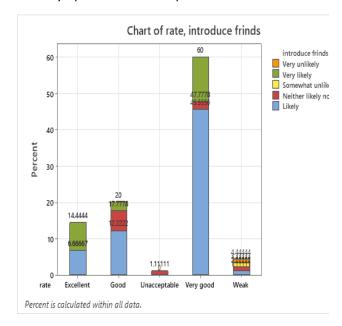
Graph 9: customer satisfaction

Next question is driven for analyzing the usefulness of the e-wallet. Most of the respondents about 71 is think the e-wallet provide useful services. And 16 respondents think it maybe provide useful services. 3 respondents think that it does not provide useful services.

the next question is driven for customer intension to use e-wallet.68 respondents says that e-wallet should available in Sri Lanka. 18 respondents says that e-wallet may be available in Sri Lanka. And 4 respondents says that E-Wallet should not available in Sri Lanka.

The promotion of the e-wallet instead of the physical cash how likely of the respondents is gone as follows. 65 respondents like to promote e-wallet. 16 respondents may be like to promote the e-wallet. And 9 respondents are not like to promote e-wallet.

Introducing to friends the e-wallet is going as follows. To recommend something to a friend we should satisfy with that product or service. So, 20 respondents are fully likely to introduce e-wallet. And 59 respondents are like to introduce e-wallet. And 9 respondents are in the neutral condition. Each somewhat unlikely and very unlikely options have 1 respondent.



Graph 10: customer satisfaction for introducing

The summarization of the diagram as follows.

Excellent : very likely (14.44%) Likely(6.66%)

Very good : very likely (60%)
Likely (45.55%)
Neither likely or unlikely(47.77%)

Good: very likely(20%)
Likely(12.22)
Neither likely or unlikely(17.77%)

Weak: likely(1.11%)

Neither likely or unlikely(2.22%)

Somewhat likely(3.33%)

Very unlikely (4.44%)

Unacceptable:

Neither likely or unlikely (1.11%)

Next question is driven for customer attraction. 33 respondents like because no more waiting in the queue. 31 respondents like as it is only wanted to swipe instead of credit card. 17 respondents like because of the receive real time offers. And also 9 respondents like with the other option.

The next question is how like to start e-wallet onwards. In here 19 respondents are very likely. 55 respondents are somewhat likely. 12 respondents are in the neither likely or unlikely. 3 respondents are in the somewhat likely option. 1 respondent is in the very unlikely option.

The next question is driven for use of e-wallet against a facility fees. 29 respondents agree to pay for year. 24 respondents like to give a facility fee if e-wallet provide more features. 20 respondents agree with other option. 19 respondents like to give facility fees if it provide many offers.

The next question is looking for the rate pf the processing speed.

Most of the people it says 54 respondents says that e-wallet has very good processing speed. And then 13 respondents say that e-wallet has excellent processing speed. 18 respondents say that it has good processing speed. 4 respondent say that it has weak processing speed. And then 1 respondent is in a unacceptable processing speed comment.

The customer care rate is in the average of 3.38

The next question is driven for easiness of use. 70 respondents come with yes. And 16 respondents are coming with may be. Then 4 respondents are come with no option.

The next thing is the trust of the e-wallet. 64 respondents agree with yes option. 22 respondents agree with may be option and 4 respondents agree with no option.

The next thing is finding requirements to develop e-wallet features.

Most of the people like to collaborate with financial institutions. 29 respondents like to communication service providers. 16 respondents like to collaborate mobile device manufactures. 9 respondents like to enhance the feature payment scheme owners. And 3 respondents like other option.

# **Conclusion**

All the decisions are done by the online questionnaire between the age of 16 to 30 from 90 respondents. All the respondents have positive attitudes towards the Electronic Wallet except one or two respondents. According to the first research question ease of use can enhance by increasing the user education. As well as enroll guidelines for each steps on the interfaces facilitates customers who are not confidence in transaction. It is better to shorten transaction procedure steps to reduce time wasting. According to second research question security protection can be enhanced by using proper encryption methods. Knowledge in

viruses, maintain system updates and neglecting unnecessary links protect the E-Wallet application well. According to the third research question in protecting the sustainability of the E-Wallet can enhance by encouraging the service providers to find sponsors to continuing the E-Wallet process. And also, providing offers time to time, organizing functions/events to collaborate with business partners and giving presents to users from the competitions attract the people with the E-Wallet.

## **Future Work**

- Service providers should encourage to find more financial partners.
- Enlarge research participants to have error free decisions.
- Experiment in developing user attracting interfaces.
- Customers should give opportunity to locate services.
- Formulate observations to have seamless transactions.

#### References

1)OUSSAMA TOUNEKTI , ANTONIO RUIZ-MARTÍNEZ

(2012)https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8939372 Users Supporting Multiple (Mobile) Electronic Payment Systems in Online Purchases: An Empirical

Study of Their Payment Transaction Preferences

2)Mia olsen Jonas head man (2011)

https://ieeexplore.ieee.org/document/604706 6 e-Wallet Properties

3)Nabia salfia , Valentina Tohang(2015) <a href="https://ieeexplore.ieee.org/abstract/document/9211213/">https://ieeexplore.ieee.org/abstract/document/9211213/</a> The Use Of E-Wallet System

### 4)Yakob Utama

Chandra(2020)<a href="https://ieeexplore.ieee.org/document/9211108">https://ieeexplore.ieee.org/document/9211108</a> Analysis of Digital wallet for higher education student using online transportation network service.

5)Fellix,

Wella(2019). <a href="https://ieeexplore.ieee.org/document/9024379">https://ieeexplore.ieee.org/document/9024379</a> Does Generation X intend to use E-wallet in daily transaction.

6)Windi Rahmadia, Siti Rochamaha (2020)https://ieeexplore.ieee.org/document/9251300 Quality in Use of digital Wallet based on ISO/IEC 25022.

7)Pooja Thiwari , Vikas Raj (2019)https://ieeexplore.ieee.org/document/8776939 A study of consumer Adoption of E-wallet special referrenc to NCR.

8)Pallavi Maindola, Niethu Singha(2018)l <a href="https://ieeexplore.ieee.org/document/844144">https://ieeexplore.ieee.org/document/844144</a>
<a href="mailto:15">1</a>
<a href="mailto:15">15</a>
<a href="mailt

9)By Bui Thaah

kowa.(2020)<a href="https://ieeexplore.ieee.org/document/9264967">https://ieeexplore.ieee.org/document/9264967</a> The role of mobile skillfulness and user innovation toward electronic Wallet Acceptance in Digital transformation Era.

10)Gaukharay Argimbiyewa , Ines Menesha(2020)

https://dl.acm.org/doi/abs/10.1145/3377571.
3377631 The Impact of E-wallet on
ADNOC's customer Satisfaction

11)Jingming zhang(2018) Research on factors Affecting consumers Offline mobile payment. <u>h</u>

https://dl.acm.org/doi/abs/10.1145/3305275. 3305294

12)Adithya Vashistra, Richard Anderson (2019) Examinig the use and non-use of mobile payment systems for merchant payments in India.

https://dl.acm.org/doi/10.1145/3314344.333 2499

13)Stig Fraud, Miolsnes Chanming Rang(2003) Online- E wallet system with decentralized credential keepers. <a href="https://dl.acm.org/doi/abs/10.1023/A%3A10">https://dl.acm.org/doi/abs/10.1023/A%3A10</a> 21175929111

14)Fabien L Gandon, Norman M. Sadeu (2003) A semantic E-wallet to reconcile privacy and context awareness. https://dl.acm.org/doi/10.1007/978-3-540-39718-2\_25

15)Arindi, amalia Suzianti (2020) Multi Generation perception towards digital Wallet.

https://dl.acm.org/doi/abs/10.1145/3400934. 3400940

16)Shasha Teng (2021) Examine actual consumer usage of E-Wallet.https://www.sciencedirect.com/science/article/abs/pii/S0747563221001011

17)Nuwan Kuruwitaarachchi (2020) A study on Fnding the factors Hindering the use of digital wallets among youth in

## developing

countrieshttps://www.researchgate.net/publication/346826438 A Study on Finding the Factors Hindering the use of digital wallets among youth in Developing Countries

- 18)Ramesh Kumar Bagla(2018) Gaps in customer satisfaction with digital wallets.. <a href="https://www.emerald.com/insight/content/doi/10.1108/JMD-04-2017-0144/full/html">https://www.emerald.com/insight/content/doi/10.1108/JMD-04-2017-0144/full/html</a>
- 19)Chun Kit lok(2015) Adoption of smart card based E-payment system for retailing in Hong

Konghttps://www.emerald.com/insight/content/doi/10.1108/S1069-09642015000023B003

- 20)Timothothy L. Keiningham (2007) The value of different customer satisfaction and loyalty metrics in prediction customer.. <a href="https://www.emerald.com/insight/content/doi/10.1108/09604520710760526/full/html">https://www.emerald.com/insight/content/doi/10.1108/09604520710760526/full/html</a>
- 21)Adrian Pakmer (2010) Predicting young consumers take up of mobile banking. <a href="https://www.emerald.com/insight/content/doi/10.1108/02652321011064917/full/html">https://www.emerald.com/insight/content/doi/10.1108/02652321011064917/full/html</a>
- 22)Debra Zahay (2008) b2B customer database management.https://www.emerald.com/insight/content/doi/10.1108/08858620810865843/full/html?skipTracking=true
- 23)Mia Olson, Jonas Hedman (2018) E wallet prototypes. https://link.springer.com/chapter/
- 24)Chanming Rong (2003) Online E-wallet system with Decentralized credential keepers.

https://link.springer.com/article/10.1023/A:1021175929111

- 25)Arpan Kumar92020) What affect usage satisfaction in mobile payment <a href="https://link.springer.com/article/10.1007/s10">https://link.springer.com/article/10.1007/s10</a> 796-020-10045-0
- 26)Abhipsa Pal (2020) The role of mobile payment technology in Sustainable and Human Centric Development <a href="https://link.springer.com/article/10.1007/s10796-020-09982-7">https://link.springer.com/article/10.1007/s10796-020-09982-7</a>
- 27) Chauhan, P. (2013). E-wallet: The trusted partner in our pocket. International journal for research in management and pharmacy.
- 28) Kalyani, P. (2016). An empirical study about the awareness of paperless e-currency transaction like e-wallet using ICT in the youth of india.
- 29) Rathore, D. H. (2016). Adoption of digital wallets by consumers. BVIMSR's Journal of Management Research
- 30) Salodkar, A., Karan, m., & Monalishirbhate, M. (2015). Electronic wallet. International research journal of engineering and technology
- 31)Upadhayaya, A. (2012). Electronic Commerce and E-wallet. International Journal of recent research and review, vol. 1, 37-41.
- 32)Barata, A. Strengthening National Economic Growth and Equitable Income Through Sharia Digital Economy in Indonesia.