



RESEARCH ARTICLE

User Reluctancy toward E-Wallet. Insights of Gen-Z in India, China, and Malaysia

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ARTICLE INFO	ABSTRACT
Received: May 11, 2024 Accepted: Aug 24, 2024	E-Wallet is an electronic wallet that has helped to ease users' daily transactions without needing coins or paper money. It reduces some risks that paper money brings and has more advantages than cons. Despite being a buzzword and its usage has become a global trend, Malaysians are generally reluctant to adopt e-wallets. This study explores the perceived risks that lead to Generation Z's reluctance to adopt e-wallets. Given the leading position of China and India in using e-wallet services, this study attempts to evaluate the insights of Generation Z from China and India against Malaysian Generation Z in using e-wallet services. This study propounds the Perceived Risks Theory in understanding the risk factors leading to the reluctance towards e-wallet services. This qualitative study uses the phenomenological design to gather and analyse the genuine experiences of the participants. The participants were chosen using the purposive sampling technique. In-depth interviews were conducted through Microsoft Team with 5 participants from China, 4 from India and 5 from Malaysia. Atlas.Ti 9 software was used to aid the coding process, and the study concluded with 8 organising themes and 4 global themes. This study found Privacy Risk has a critical impact on the participants from all three countries. On the contrary, all the participants implied that Psychological and Performance Risk has the most negligible impact towards their e-wallet usage. Remarkably, only Malaysian participants acknowledged the significant role of Financial Risk towards their e-wallet usage.
<p>Keywords</p> <p>E-Wallet</p> <p>Reluctance</p> <p>Generation Z</p> <p>Perceive Risks</p> <p>Phenomenological Design</p>	

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INTRODUCTION

With nearly uncountable applications available on mobile phones, mobile applications have encouraged consumers to adopt the modern way of making payments by using electronic wallets (Ramli & Hamzah, 2021). Electronic wallet (EW) eliminates the need to carry many cards and cash (Andrew & Tan, 2020). Hence, it has led to user reliance on EW in performing transactions (Yang et al., 2021).

Despite being a buzzword and its usage has become a global trend, Malaysians are generally reluctant to adopt EW (Aji et al., 2020). A survey by Ramli and Hamzah (2021) shows that only 8% of users in Malaysia rely on EWs in their payments, as most of them favour online banking and credit/debit card payment methods. It can be related to internet inaccessibility in rural areas and security concerns (Yuen, 2019), which restrict Malaysians from adopting EWs. It is worth mentioning that the government's massive investment worth RM 1.2 billion to promote awareness towards the EW program in Malaysia (Fong, 2020) is deemed ineffective, given the Malaysians' reluctance.

China and India will be overtaking the United States of America (USA) by 2030 in the economy (Singh, 2019; Jennings, 2022), given their talented workforces and technological advancements. It seems apparent even in the use of EW where Chinese and Indians have exceeded the USA's record with 45% and 35%, respectively, compared to Americans with a mere usage of 6% in 2022 (Choudhry, 2023). While Malaysia is leading the usage of EWs in Southeast Asia, the usage is far below that of China and India (Kaissi, 2021).

Generation Z makes up 32% of the world's population, and they have been very familiar with various technologies since birth (Halim et al., 2020). Nevertheless, despite being tech-savvy, Generation Z prefers cash payment over EWs. Multiple factors are cited as the underlying reasons. Generation Z blamed the application's instability and uncertainties (Mathew et al., 2020) and their concern about privacy and security issues (Karim et al., 2020; Li et al., 2020; Subramaniam et al., 2020). Increasing their confidence and willingness to adopt EWs would be instrumental in sustaining the continuous usage of EW.

Existing studies mainly focus on generic factors that influence user behaviour on EW (Trivedi, 2016; Ajmera & Vhatt, 2020; Subramaniam et al., 2020). Besides, the existing studies on Perceived Risk investigated EW usage either in the context of user acceptance (Dewi et al., 2021; Foster et al., 2022) or during the Covid-19 pandemic (Ming & Jais, 2022; Kee et al., 2022). Additionally, most existing studies are quantitative (Dewi et al., 2021; Teoh et al., 2020; Ming & Jais, 2022), focusing on the participants' reported behaviour rather than the actual behaviour.

The current study is expected to fill the literature gap by employing a suitable qualitative research design to understand the actual scenario of EW reluctance resulting from the perceived risks. Additionally, comparing Generation Z's responses from the EW's leaders, namely China and India, against Malaysia is pertinent. Malaysia could take inspiration and knowledge from China and India to better promote EW services.

E-wallet services

Briefly, EW is a web application that can be used over any device as long as the device comes with a steady internet connection. While Alipay and WeChat are the most used EWs in China, Paytm dominates the Indian market. Touch n Go and Grab Pay are popular E-wallets in Malaysia.

Users must first link their debit or credit card information and top up their EW to contain sufficient funds before purchasing (Christoph, 2021). Users then interact through Near-field Communication Technology (NFC), QR Code, Barcode scanning, or any other options available to make the payment. Besides, users can use EW to transfer money to another party. The EW rewards users whenever they add funds or spend with partner merchants. Paytm, an EW used in India, provides users with points on transactions through the Paytm App, where users can redeem the rewards accordingly (Paytm, 2021).

Moreover, EW services also provide investment features for the users to earn potential daily returns. Touch 'n Go announced the GO+ services, allowing users to insert money into the GO+ account, and their money will be invested in a low-risk money market fund managed by Principal Asset Management Berhad (Alex, 2022). Similarly, Alipay and Paytm also have this function, allowing users to invest in the stock market.

LITERATURE SUPPORT

Bauer (1967, p. 24) defined perceived risks as the "... risk in the sense that any consumer's action will produce consequences which he cannot anticipate with anything approximating certainty, some of which are likely to be unpleasant". Subsequently, Jacoby and Kaplan (1972) proposed the model of Perceived Risk Theory (PRT), which comprises five components, namely:

- Performance Risks: potential uncertainties related to malfunctioning of products or services.
- Financial Risks: potential financial loss from using the products or services.
- Psychological Risks: negative experience derived from using the products or services.
- Physical Risks: potential harm to users using the products or services.
- Social Risks: potential loss of users' perceived status from using the products or services.

Since then, Jacoby and Kaplan's (1972) typology has become a popular theoretical foundation among researchers worldwide investigating the consumer's perceived risks. The current study adapts this typology to explore users' reluctance towards EW services. Performance, Privacy, Psychological, and Financial Risks are maintained as they are proven to have a significant influence on the usage of EW (Chang et al., 2021; Humbani, 2021; Sentanu et al., 2020; Lee & Kim, 2020; Ryu, 2018; Yang et al., 2015). Meanwhile, Social and Physical Risks are excluded from this study as they are insignificant and do not threaten human life online (Ariffin et al., 2018; Featherman & Pavlou, 2006).

This study considers:

- Performance Risk is the problems related to the functionality of EW services, which are often affected by transactional processing errors and the system's Malfunction.
- Financial Risk is the monetary loss in using EW services, typically resulting from overspending, fraudulent transactions, or providing wrong details.
- Privacy risk relates to disclosing users' confidential information to third parties using EW services, usually caused by the users' recklessness or others' unethical activities.
- Psychological risks refer to the user's worry or mental tension while using EW services caused by various challenging situations.

Relationship between perceived risks and e-wallet reluctance

Financial risk

Any monetary or financial loss could cause Generation Z to experience Financial Risk while using EWs (Sentanu et al., 2020). The advancement of technologies creates ways for phishers to infiltrate one's EW system and transfer the users' money in the EW to the phishers' account. It caused the fear of fraudulent transactions while using EW, as hackers can do this without the users' knowledge. An example of a financial scam is when 20 teachers' Touch' n Go account was hacked, which lost RM20,000 from their bank accounts (Jerrica, 2022). Hackers can reload E-Money with the user's card registered in the account before they transfer the money to their EW account (Jerrica, 2022). Moreover, according to Ramsey Solution (2022), the EW system has made it easy for users to spend more money than they were meant to. Unlike paying with cash or credit/debit card, EW makes users spend more money as users may lose the sense of making payment, as scanning QR codes or tapping for NFC does not feel the same as handing over cash to the cashiers. Using EW raises concerns about overspending, contributing to the user's refusal to use EW (Lo & Harvey, 2011; Razer, 2019). Hence, Proposition 1 is proposed:

P1: Financial Risk would affect Generation Z's reluctance to use EWs.

Privacy risk

Privacy threats are crucial drivers that derive users from EW (De Kerviler et al., 2016). Users will have to register an EW account with their private information, such as their identity card number, credential card number, home address, and many more, before they can access the services provided by the EW service provider. This information directly reflects the users' details to others. Hence, concerns about the possible leakage of such details by the EW service provider could negatively affect the use of EWs. It could cause hassles to users, such as freezing their registered card account, amending their details (e.g., email address, password, username, etc.), and taking other precautions to prevent fraudulent transactions and hence protect themselves against the hackers (Chandrashekhar & Manikandan, 2020). Thus, perceived privacy risk is crucial to Generation Z's reluctance to EW. Hence, Proposition 2 is proposed:

P2: Privacy risk would affect Generation Z's reluctance to use E-Wallets.

Performance risk

A malfunction in the EW system could affect Generation Z's reluctance to adopt EW (Featherman & Pavlou, 2006). In countries such as China, where society has gone mostly cashless, citizens rarely carry cash with them, as they rely heavily on EW payment (Lehman & Rothstein, 2021). Hence, a malfunction of the EW system could negatively affect the users, as they may not be able to purchase the item they want or make any money transfer until the issue is resolved. Failure to make payments

and transactions could result in a negative impression of the EW (Wang & Yi, 2012), and users may perceive that the EW system cannot provide them with the intended services promised. It sets fear in the users, causing them to be reluctant to adopt EW in their daily payments. Besides, in developing countries such as Malaysia, where EW heavily relies on scanning QR codes or Barcodes (Wah, 2019), issues may arise when users cannot scan the merchant's QR code or the merchant cannot scan the user's barcode. It could cause transaction issues, and users may have to pay with cash. Hence, Proposition 3 is proposed:

P3: Performance risk would affect Generation Z's reluctance to use E-wallets.

Psychological risk

Many previous studies showed that psychological Risk is a factor that has an impact and can affect the perceived Risk of the users of EW services (Mustafa & Kar, 2019; Namahoot & Laohavichien, 2018; Cocosila & Trabelsi, 2016). Users may fear wasting time while using the service and fearing disapproval from their family and friends, making them feel anxious and stressed (Cocosila & Trabelsi, 2016). For example, making poor purchasing selections can cause customers to feel regret and irritation, making them refuse to use the services in the future (Ariffin et al., 2018). In addition, psychological insecurity is found to negatively affect EW adoption as the service consumption is not worth the hassles that need to go through (Humbani, 2021). Hence, Proposition 4 is proposed:

P4: Psychological Risk would affect Generation Z's reluctance to use E-wallets.

RESEARCH METHODOLOGY

The study employed a phenomenological methodology within the qualitative research framework to elucidate the participants' motivation and risk factors while capturing the contextual setting. The study focuses on Generation Z individuals pursuing higher education in Malaysia, China, and India with prior EW experience. The justification for selecting these criteria is based on the premise that individuals belonging to Generation Z were reared during a period characterised by widespread digitalisation, resulting in greater technological proficiency. Additionally, it is worth noting that Generation Z represents the largest demographic of individuals who engage with EW and possess a more comprehensive comprehension of its intricacies.

The present study utilised a purposive sample approach, which involved selecting individuals from various categories expected to possess significant and contrasting perspectives on the ideas and concerns related to environmental welfare. The sample comprised 14 participants with expertise in EW, with five responses from China, five from Malaysia, and four from India. The participants were chosen using a combination of the researchers' network and suggestions from their supervisor. According to Boyd (2001), a sample size of two to fifteen individuals is sufficient for conducting a phenomenological investigation.

The data collection for this study was facilitated through an online interview via Microsoft Teams. The primary language of the discussion was English, with the utilisation of Chinese for interviewees from China who needed help understanding English. The interview questions were formulated based on prior research conducted by Lee (2009), Lopez-Nicolas and Molina-Castillo (2008), Featherman and Pavlou (2003), and Yousafzai et al. (2003). The interviews commenced by administering three demographic inquiries about age, race, and nationality, following three questions to elicit participants' experiences with EW.

To uphold precision and reliability, researchers manually transcribed responses using Microsoft Word. Three researchers were responsible for transcribing, and the obtained results were cross-compared to ensure their accuracy. Subsequently, the transcripts were analysed using Atlas.ti9, a software tool researchers used to convert them into codes for qualitative data analysis. The data obtained from interviews, which includes responses to open-ended questions in the form of free-text answers, undergoes a coding process to convert it into a format suitable for qualitative analysis. Researchers generate the themes during the data analysis by examining and analysing unprocessed data. The data underwent a diagnostic process utilising theme analysis after descriptive and in-vivo coding techniques. It is worth mentioning that this study employed the triangulation approach to enhance the reliability and persuasiveness of the findings. Researchers assessed the utilisation of EW

among Generation Z. This entails employing several data sources, diverse procedures, various investigators, theoretical viewpoints, and practices to ensure coherence and trustworthiness in the conclusions.

The ethical considerations for this study revolved around ensuring the anonymity of the participants. Participants were informed that their comments would be utilised solely for academic objectives and that their names would be safeguarded to uphold ethical standards during the interview. In addition, the researchers obtained ethical permission from Tunku Abdul Rahman University, and all procedures adhered to the university's moral code of conduct.

DISCUSSION OF KEY FINDINGS

This section unveils the findings from Generation Z in China, India, and Malaysia. It includes the participants' profiles, unveiling abstract qualitative data and in-depth discussions. Microsoft Word and Atlas.Ti9 was used in the process. 14 Tertiary Students in China, India, and Malaysia with experience with EW were approached through WhatsApp and WeChat for the vindication of interview. Consent was obtained from all interviewees to record the interview session. Appendix 1 lists the demographics of every interviewee in the discussion. Meanwhile, Appendix 2 analyses the characteristics studied using the interpretation method on the recognised Organised and Global Themes, and such themes are being scrutinised under such component. Throughout the study, the researchers have concluded a total of 8 organising themes, namely Poor Security System, Transactional Error, Overspending, Inconvenient, Issues with Reward Programs, Malfunctions, Anxious, and Privacy Leaks, and 4 Global Themes – Psychological Risks, Performance Risks, Privacy Risks, and Financial Risks.

Privacy leakage

The issue of privacy breaches among users has emerged as a significant concern, primarily because EW requires collecting users' personal information for verification purposes (Nguyen et al., 2021). Privacy leak occurs when EW organisations disclose the users' sensitive information, such as the users' email address, phone number, and many more, to the public either intentionally or unintentionally (Zuo et al., 2019). Such concern arises when the EW service providers force the users to provide their Private Information to access the functions made available in the EW application entirely, increasing the chance of users being exposed to Privacy Risk. From the findings, Privacy leakage has been a primary concern for most interviewees in all three countries. According to Kouliaridis et al. (2023), Privacy Leakage could lead to terrible outcomes, such as access to information for nefarious purposes and hackers' access to information for nefarious purposes. Such claims were supported by Participants C4, M2 and I2, who mentioned that the hackers could easily access the users' registered card information and conduct activities such as scamming with the users' identity.

"ermmm... Because this will let people... Like... uhhh... how do I put it... Like... like illegal card seller.... To steal all your information.... money in your card when there is a... a... a leakage of our private information, and they might use your money.... Card to scam others." (Participant C4)

"Yes, because you know...the current generation, uhh...I mean, there are so many students who study a lot of artificial intelligence, so they can easily hack through our information. So you know...increase in E-wallet will always make them keep that as a motive and try to have the information that's been erh...listed on the E-wallet....." (Participant I2)

"Mmm...got disclosed to the public... I'll say yes, in the sense of being exposed publicly, without your acknowledging until you found out too late, yeah" (Participant M2)

Among the other Organised Theme, Privacy leak poses the greatest threat to the users in Privacy Risk. Although EW was viewed to be secured, the participants would still feel uncertain while binding their Private Information to the EW application (Huong et al., 2021). Due to various concerns, some participants would research the EW providers before trying them (Teoh et al., 2020). It could help the participants to overcome Privacy Risks, such as Privacy Leakage, that could cause an interruption in their lives. Hence, Proposition 2 is supported by all three countries.

Poor security system

The solidification of the EW Security System is especially vital, and it is one of the important aspects of the Financial Risk. Fraudulent Transactions, hijacking of debit or credit cards, and mistrust by the users are examples that would arise from having weak cybersecurity in the EW application (Mohamed et al., 2019). Such issues could arise from the user's or the organisation's perspective. From the users' perspective, it could be when Generation Z do not fully utilise all the security functions such as Two-Factor Authenticator, Transactional Notification, Complex Password Sequence and others (Hassan & Shukur, 2021) made available to them that could help them strengthen their EW account.

On the other hand, a poorly executed or outdated security system may be an issue from the organisational perspective (Alam et al., 2021) that could cause the downfall of the EW system, making it prone to cyberattacks. While such an issue may be a worry to Generation Z in Malaysia and India, according to Alam et al., 2021, it is attested that the fraud rate of the Chinese EW services - Alipay, has a fraudulent rate as low as 0.01% while WeChat Pay is under 0.02%. Twelve out of fourteen interviewees supported the claim that a Poor Security System was considered one of the major factors that caused Financial Risk, making them paranoid about using the EW application. It was supported by Teng and Khong (2021), who stated that a good Security System is needed to assuage worries about Financial Risk.

"Oh, yeah. In such a case, there might be issues. They might. The app. If there is no proper coding, then the app might be vulnerable. And hence there'll be data leak, which will be a severe issue where all your information might get leaked... (Participant I2)

"Yeah, after that he went to lodge a report, and the issue has yet to be solved, because it is a cross-provincial crime, and it is also because of his account getting hacked. Besides, by clicking the link, the hackers have also breached into his account.....(Participant C3)

A similar concern was also implied by the Malaysia Participants, who stated the intelligence of hackers these days could easily track and access their Debit / Credit Card information without their acknowledgement.

"Mm, I think yes also. Because uh... I'mm not sure I heard it from Grab but when you pay like when there is transaction going through, then it'ss all managed through a data, a big data. So, if the hacker has a high skill, then they can actually track easily and then hack in uh... whatever device that you use so I think it's a yes" (Participant M4)

Overall, a Poor Security System will increase the chances of users' EW accounts being hacked, giving users a sense of insecurity while using the EW applications (Dasgupta et al., 2019). While such an issue may demotivate Malaysians and Indians in adopting EW, the effect does not seem to affect the participants in China, as they believe that EW is inseparable from them. Thus, the Poor Security System positively impacts Generation Z in India and Malaysia. Hence, Proposition 1 is supported in Malaysia and India but not China.

Malfunctions

Technical failures such as scanning issues contribute to malfunctioning, leading to Performance Risks that hinder the users apart from the EW applications (Iqbal, Rifat, and Nisha, 2021). Such an issue could badly affect the users' experience as server issues could cause all the information that was being saved in the cloud to be inaccessible (Ying & Mohamed, 2020). Below are the responses provided by the participants?

"Yeah, uhhhh. the first one, that I face is uhhh... scanning problems. Yeah, sometimes, uhhhh... Touch n Go need to scans a lot of times so that they able to get uhhh... the code for the payment. Yeah. Uhhh..." (Participant M1).

"Erh..Other issues? Like erh...the server may be so much busy, I could not check my account balance. Also, it will be that much busy. Maybe the server crashing erh...maybe like it may be like that of kind" (Participant I3)

"Yes. I will feel nervous when there is a slight delay in scanning the QR Code. Because I am worried that the following payment will have some delay as well" (Participant C1).

From the responses, Malfunction plays a vital role in Performance Risk. However, it does not apply to the Chinese Participants who have encountered minimal Malfunction. Due to the nature of EW payment in Malaysia and India, the EW providers must ensure that they have a stable system or an excellent scanning feature that can overcome the issues faced by Participant M1 and I3. Hence, Proposition 3 applied to the Malaysian and Indian but not the Chinese.

Anxious

While Psychological Risks such as anxiety may hit many (Ariffin et al., 2021), it may not be the factor that affects Generation Z's Reluctance to adopt EW. Among 14 participants, each agrees that Psychological Risk is not a barricading factor, and they would continue using EW daily. Of the Malaysian and Indian participants, 10 mentioned that Psychological Issues can be overcome easily and not occur too frequently. On the other hand, 5 Chinese participants agreed that EW has been part of their lives. Responses are as follows:

"Like I cannot open the E-Wallet right, so I also one of the person... I don'tt like to bring money outside, go out. So, if I cannot use the E-Wallet I do not know what alternative I can use already so I will worry and I will feel anxiety when I cannot open the E-Wallet and the server down" (Participant M3)

"Yes, because when there are a lot of people in the queue and there is a connection problem, then it will make me feel anxious" (Participant C2) "No, I'll be very hard and consider because they'll be shouting like eh go fast, go fast we have we have oh go fast, go fast so it'll... So we just ask our friends cards first or something to get proper then we'll just pay back" (Participant I4)

"because...because...because if you did not bring any cash or debit or credit card with you, and if you... if you are using E-Wallet without internet, then firstly you will not be able to make the payment, and secondly, you may not get what you wanted. And if you are queuing...queuing for almost 1 hours....." (Participant C4)

With the being concluded, Psychological Risk does not seem to affect Generation Z in all three countries. Hence, Proposition 4 is not supported.

CONCLUSION, IMPLICATIONS AND RECOMMENDATION OF THE STUDY

The study identified four types of perceived risks: Financial Risk, Privacy Risk, Performance Risk, and Psychological Risk. Financial Risk is crucial to prohibiting users' intention to use EW services. In contrast, privacy risk concerns the potential leakage of personal data. Performance risk involves the possibility of system crashes or high traffic, which demotivate users. Overspending is another threat that affects Malaysian participants' reluctance towards EW, as it can be a natural bulwark for users who lack self-control.

Privacy risk involves the potential for EW services to leak users' privacy, disrupting their lives. System outages can also increase the risk of system crashes and high traffic, slowing down EW processes and affecting Generation Z's reluctance towards EW.

Many perceive EW as convenient, but some participants believe these challenges can be overcome easily. Transactional errors encourage users to use cash for transactions, but some participants have experienced them before. Despite their experiences, reward programs do not significantly impact Generation Z's reluctance towards EW. Anxiety is believed to affect users' reluctance toward EW, making them uncomfortable and stressed, encouraging them to give up EW as their payment medium.

The study contributes to managerial implications for policymakers and business providers, suggesting that EW providers should develop a more robust security system to increase users' confidence and faith in the service provider. The government should raise qualifications for EW services by evaluating the security system's standards and developing reminders to help users

monitor their expenses. Policymakers should also strengthen their laws and regulations to reduce privacy leakage and ensure system error reduction.

The rewards system is crucial in attracting users to adopt EW, and business providers should ensure it operates well to engage with users. The study also urges business providers to maintain the transaction system of EW with effective and efficient managers.

Based on the findings, it indicated that some merchants did not accept EW payment methods, and future research could expand research on merchants' intention to use EW services in China, India, and Malaysia. For example, findings indicated that there are some overlapping between financial risk and security risk in our finding. Hence, future researchers can consider additional construct that are related to the context. Besides, negative experiences caused by errors or slow connections can demotivate users' intention to use EW actively. Future research could focus on understanding user emotions and developing a better EW system to reduce these negative emotions. Future researchers could pay more attention on recognizing user emotions and develop a better EW system to trim down the negative emotions experienced by the users.

Limitations encountered during the study include poor internet connectivity, language barriers, and a limited scope of study. Future research should consider expanding the range to Western countries and including Malays and Indians in Malaysia to better understand their experiences, perspectives, and viewpoints.

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APPENDIXES

Appendix 1 – Demographic profile

Participants	AGE	COUNTRY	UNIVERSITY	FAVOURITE E-WALLET	USER PERCEPTION
M1	21	Malaysia	University Tunku Abdul Rahman	Touch N Go, Grab Pay	-Convenient -Bring less cash
M2	21	Malaysia, Penang	INTI college	Touch N Go	-Convenient -alternate for cash payment
M3	21	Malaysia	University Tunku Abdul Rahman	Touch N Go, Grab Pay, Shopee Pay	-Convenient -Online bill payment -alternate for cash payment
M4	21	Malaysia	University Tunku Abdul Rahman	Touch N Go, Grab Pay	-Convenient -bring less cash -sense of security
M5	24	Malaysia	University Tunku Abdul Rahman	Touch N Go, Shopee Pay	-Convenient -Cashless payment for meals and shopping -bring less cash
C1	22	China, Gan Su	Monash University	WeChat Pay, Ali Pay	-Convenient -Sense of security -bring less cash
C2	22	China, Hubei	Guangzhou Agricultural University.	WeChat Pay, Ali Pay	-Convenient - alternate for cash payment
C3	22	China, Hubei	Huazhong University of Science and Technology	WeChat Pay, Ali Pay	-Convenient -Only required smartphone to make payment
C4	23	China, Shan Xi	Monash University Malaysia	WeChat Pay	-Convenient -fast payment process
C5	22	China, Gansu	Henan University of Technology	Alipay and WeChat Pay	Convenient -fast payment process -Only required smartphone to make payment -Sense of security
I1	19	India, Tamil Nadu	Vellore Institute of Technology	Google Pay, Bank of Baroda	-Convenient -use for ticket booking
I2	19	India, Tamil Nadu	Vellore Institute of Technology	Google Pay	-Convenient -Easier -Sense of security -bring less cash
I3	18	India, Tamil Nadu	Vellore Institute of Technology	Google Pay, Paytm, Amazon Pay	-Convenient -able to pay for everything
I4	19	India, Tamil Nadu	Vellore Institute of Technology	Google Pay, Paytm,	-Easier

Appendix 2 – Summary of organising and global themes

No	Organising Themes	No. Of Quotes	% Total	Basic Themes	No. Of Quotes	% Within Organizing Theme	Global Themes
1.	Poor Security System	93	22.14%	Vishing Fraud Cyberattack Third Party Transaction Sense of Insecurity	5 14 30 2 42	5.38% 15.05% 32.26% 2.15% 45.16%	
2.	Transactional Error	29	6.9%	Wrong Input of Amount Extra payment No other Payment Alternative	7 7 15	24.14% 24.14% 51.72%	
3.	Overspending	28	6.67%	Paranoid Encourage Overspending High Self-Control Lack of Senses Auto Payment	3 5 7 10 3	10.71% 17.86% 25% 35.71% 10.71%	Financial Risks
4.	Inconvenient	12	2.86%	Insufficient Balance Merchant Requirement	1 11	8.33% 91.67%	
5.		7	1.67%	Unattractive Reward Programs	4	57.14%	

	Issue with Reward Program			Expiration Date Not Display	2	28.57%	
				Poor Description	1	14.29%	
6.	Malfunctions	41	9.76%	Log-in Issues	1	2.44%	Performance Risks
				Customer Support Issue	2	4.88%	
				System Issue	12	29.27%	
				Invalid QR Code	2	4.88%	
				Unresponsive Scanning	9	21.95%	
				Poor QR Code Display	2	4.88%	
				Power Cut	2	4.88%	
				Bug	2	4.88%	
				Issue with Face Recognition System	4	9.76%	
				Preliminary Stage	2	4.88%	
					5	12.20%	
	Anxious	75	17.86%	Connectivity Issue	51	68%	Psychological Risks
				Wasting Time	2	2.67%	
				Shopping Cart Abandon	4	5.33%	
				Gazing	3	5.88%	
				Phone Lagging	1	1.33%	
				Hogging the Line	14	18.67%	
					6	4.44%	
				Phishing	8	5.93%	
				Lack Awareness	14	10.37	
				Privacy Exposure	13	9.63%	

	Privacy Leak	135	32.14%	Improper Information Collection	12	8.89%	Privacy Risks
				Breaches	13	9.63%	
				Concerned			
				Forced to Provide Private Information	7	5.19%	
				Harassment	11	8.15%	
				High Self-Awareness	33	24.44%	
				Losing Phone	4	2.96%	
				Out of Control	13	9.63%	
				Third Party Access		0.74%	
					1		
	Total	420	100%		420	-	-

Themes and counts