

Chapter II

Review of Literature

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In order to have a wide-ranging view of the existing literature related to the study, a review conducted has been presented here. This review has provided a vision of the framework of the study undertaken on the generational analysis on users perception and satisfaction on e-wallet services among Generation Y and Z.

Kim and Mirusmonov (2009)¹ have made an empirical study to identify factors affecting mobile payment adoption. TAM model has been used to study the variables for identifying users' behaviors to use mobile payment systems. Data have been collected from 360 wallet users in Korea using a well-structured questionnaire. A Structural Equation Model (SEM) has been framed using the collected data. The findings of the study reveal that ease of use, perceived usefulness and trust have a high impact on consumers' intention to adopt e-payment mode. Further, the study has also inferred that subjective norms and personal transformation have no significant influence on the factors affecting the adoption of digital payments. It has been suggested that digital payment services must be proposed and developed in order to deliver value-based customer services and decrease additional costs incurred while making transactions.

With the objective to investigate Iranian customers adoption of mobile payments **Abbas Keramati, Rose Taeb and Arad Mousavi Larijani (2010)²** have carried out a research study. A well-structured questionnaire has been used for collecting data. Data for the study have been collected from 623 respondents. Descriptive analysis has been used as a statistical tool to analyse the collected data. The result of the study has shown that the younger generation people with more income, highly qualified, who travel all the time and reside in urban areas are more adapted to mobile payment.

Shuiqing Yang a et al. (2012)³ have conducted an empirical study on mobile payment services adoption across time on the effects of behavioural beliefs, social influences and personal traits. This study attempts to ascertain the determinants of the pre-adoption of digital payment services and to discover the evolution of the factors. The study also attempts about post-adoption stages from a general viewpoint including behavioral

beliefs, social influences and personal traits. Primary data have been collected from a sample of 483 adopters and 156 present users from China through a structured questionnaire. The findings of the study implied that combination with social influences and personal traits have been significant determinants for digital payment services, adoption and use, but their behavioral intention changes across in various stages.

Lai Chin Chia et al. (2014)⁴ have explored about the response of consumers when wallets are fused into smartphones. The study has been based on the primary data collected from 400 respondents through a structured questionnaire using a convenience sampling method from Generation Y in Malaysia. A descriptive study combining exploratory study with quantitative data has been used for this study. Pearson correlation analysis and multiple regression analysis have been used as a statistical tool. The findings of the study have implied that all the variables in UTAUT are positively related to the behavior intention of Generation Y on mobile wallet adoption in Malaysia. It has been also concluded that, facilitating conditions of perceived enjoyment, effort expectancy, hedonic motivation and habit are all significant to influence the adoption of digital wallets among Generation Y. It has been further explored that social influence and price value have a positive relationship with behaviour intention, whereas with regard to relationship factor it has been vice versa. Further, it has been revealed that facilitating conditions have been inferred as the strongest indicators of mobile wallet implementation among Generation Y in Malaysia.

Dismas Anthony and Darlene Mutalemwa (2014)⁵ has carried out a research study on Zantel's Z-pesa services to identify the factors influencing the usage of mobile payments in Tanzania. A sample of 120 customers using a structured questionnaire and 10 customers through telephone interviews have been selected for the study. The result of the study has shown that perceived ease of use, usefulness, cost, mobility, trust and expressiveness are the several factors that obstruct the adoption and usage of Z-pesa services. It has been concluded that more agents should have been recruited widely to make the service more accessible. It has been further suggested that new technology has to be developed for users to access through Automated Teller Machines (ATMs) and regular training and support should be provided to avoid failures and operational problems.

Aminu Hamza and Asadullah Shah (2014)⁶ in their article titled “Gender and mobile payment system adoption among students of tertiary institutions in Nigeria” have investigated on how the influence of the variables differs by gender of the users. The conceptual model has been formed with two additional variables with the use of the Technology Acceptance Model (TAM) which comprises perceived usefulness, perceived ease of use, perceived compatibility and social norm. A well-structured questionnaire has been used for collecting data from 214 respondents in Nigeria. The study has highlighted that perceived usefulness, perceived ease of use and social norm influence the behavioural intention to adopt mobile payment systems among students. The study has also highlighted that perceived ease of use and social norm differs based on the gender of the students. It has been further concluded that there has been no significant difference found in the general adoption of the mobile payment system based on gender.

Emma Slade, Yogesh Dwivedia and Niall Piercy (2015)⁷ have discussed the Consumers’ adoption intents of mobile payments in the United Kingdom extending UTAUT with innovativeness, risk and trust, TAM and the Unified Theory of Acceptance and Use of Technology (UTAUT) model have been used to study the variables. The data have been collected from 200 respondents. The findings of the study shows that performance expectancy, social influence, innovativeness and perceived risk significantly influenced non users to adopt Reference Model Project (RMP), whereas effort expectancy did not influence .The study has also revealed that there has been a significant difference in the effect of trust on behavioral intention. It has been concluded that these findings have theoretical and practical implications on mobile payments system.

Francisco Liebana-Cabanillas, Juan Sanchez-Fernandez and Francisco Munoz-Leiva (2015)⁸ have made a conceptual study with the aim to propose and assess an integrative theoretical model to find the importance of certain factors viz., external influences, ease of use, attitude, usefulness, trust, the risk for the adoption of a new mobile payment system advertised on new electronic environments and also evaluate the moderating effect of the age of the consumer in the use of this tool. The result of the study shows that the proposed behavioural model has appropriately adjusted, proving that the age of the user introduces significant differences in the proposed relationships between third parties’ influence and ease of use of the payment system. It has also further found that there has

been a significant difference between trust and a favourable attitude towards usage of payment systems.

Jay Trivedi (2016)⁹ has made a conceptual study on factors determining the acceptance of e-wallet among the Generation Y. TAM has been used for the study. Primary respondents have been collected from 180 students in Ahmedabad. Convenience sampling method has been used to collect the data. Factor analysis and structural equation modeling have been used for analysing the collected data. Among various factors viz., perceived ease of use, perceived usefulness, subjective norms, perceived trust and self-efficiency, the study has been concluded that perceived ease of use and perceived usefulness influences the acceptance of e-wallet services in India.

Venkata Ramana Rao and Lohithkumar (2016)¹⁰ have made an empirical study on the factors that influence adoption of mobile wallets especially by college going students in twin cities like Secunderabad and Hyderabad in the state of Telangana. 184 responses have been collected through a structured questionnaire using convenience sampling method. The collected data have been analyzed using ANOVA and percentage analysis. The study has highlighted that there is a relationship between the factors like service, convenience, accessibility, social status, financial security and intention to adopt. The study has further suggested that government can take measures to improve the adoption of digital payments.

To identify the critical areas of digital wallets and to study about the mobile payment service provider model **Jayadatta (2016)**¹¹ has tried by conducting SWOT analysis on five major companies providing mobile payment services. The findings of the study revealed that digital wallet seeks to revolutionize currency usage. The study has also registered that Paypal has been the most important factor in developing the digital wallet concept for the last few decades. It has been suggested that digital wallets should ensure the continued relevance of banks as a broad range of players do accelerate innovations around how consumers move, pay and also manage their money.

Rathore Hem Shweta (2016)¹² in her research article explored the factors that have been influencing consumers in accepting the digital service system and the challenges faced by them while using the same. The study have been conducted by collecting primary

data from 150 respondents in Uttar Pradesh. The collected data have been analysed using the statistical tool ANOVA, t-Test and percentage analysis. The result of the study indicated that customers have been adopting digital wallets with utmost rapid pace due to convenience and ease of use. The study has also proposed that digital wallets are quickly becoming a conventional mode of online payments and technoid consumers show more interest in digital wallet services.

The probable reasons to analyse the consumer attitude towards use of mobile wallets and its future in India, **Naseem Ahmad (2016)**¹³ has conducted research with an interview schedule among young Indians under the age group of 18 to 60 in Delhi. The primary data collected from the sample respondents have been analysed using simple percentage and descriptive analysis technique. Result of the study has implied that the Indian customers have been seeking for quality, price and refer customers review before purchasing a product. The study has also suggested that the marketer should convince the customers on pre-purchase decisions made on their desired product. It has been further concluded that the marketers should use the effective components to reach the targeted groups and to build a brand image.

The main goal of the paper entitled “A study of factors affecting the intention to use mobile payment services in Vietnam”, **Gia-Shie Liu and Pham Tan Tai (2016)**¹⁴ conducted a research study to spot out factors affecting the aim to use digital payment services. This study attempts to explore the impact of several variables obtained from mobility, convenience, compatibility, M-payment knowledge, ease to use, usefulness, risk, trust and safe to use on intention to use digital payment services. Samples have been collected from 604 respondents using quantitative questionnaire method. Statistical analysis employed structural equation modeling to test the hypotheses. The result shows that convenience of mobility, compatibility and mobile payment knowledge have impacts on ease to use and usefulness. The finding of the research has significant effect for the improvement and development of mobile payment services in Vietnam. It has been concluded that some innovative measures must be undertaken by the financial sector for the future development of mobile payment service business.

To study the awareness level on various mobile wallet services among management students and to find out the reasons for poor practice of mobile wallet services **Manikandan and Chandramohan (2016)**¹⁵ conducted a detailed study on consumer's adoption of e-wallets in Karaikudi, Tamilnadu. Primary data have been collected from 150 respondents using questionnaire method. Statistical tools viz., percentage analysis and ANOVA have been used to analyse the collected data. The notable findings of the study specifies that in future the mobile wallet will be an alternative for other modes of online payment. It has been further denoted that factor like brand loyalty and convenience plays a dominant part in adoption of mobile wallet whereas, security and trust has been considered as a challenging element for the users.

Gokhan Aydin and Sebnem Burnaz (2016)¹⁶ in their article on “Adoption of mobile payment systems” have made an attempt to study the elements contributing to consumer attitude development and intention to use mobile payment systems. Primary data have been collected from a sample of 1395 respondents from Turkey through a structured questionnaire using stratified random sampling method. The data have been analysed using partial least squares and structural equation modeling. The findings of the study indicated the importance of flexibility in usage of mobile payments and usefulness in attitude growth. The study has also revealed that security concerns have minimum level of effects on attitudes and intentions. It is concluded that result of social influence has been found to be insignificant among the users and there have been differences between consumers' and non-users' perceptions .It has been further found that there has been a significant differences in the beliefs by majority of the constructs engaged in the study.

Ikram Daştan and Cem Gurler (2016)¹⁷ in their empirical study on “Factors affecting the adoption of mobile payment” have examined about the effects of factors which includes perceived trust, perceived usefulness, perceived ease of use and perceived mobility on adoption of digital payment system in Turkey. Convenience sampling method has been used to collect data from 225 respondents through structured questionnaire. Structural equation modeling has been used as a research model. The study has identified that perceived mobility ,perceived trust and attitudes positively affect the adoption of digital payment system ; perceived ease of use and usefulness have no influence on usage

of digital payment system. The study has also inferred that environmental risk is negatively related to perceived trust and perceived reputation is evidently related to perceived trust.

Ramesh Sardar (2016)¹⁸ in his research article made an in-depth study about the preferences towards mobile wallets among the urban population in Jalgaon city. The study has also made an attempt to understand the impact of demographic variables and the factors refraining the usage of e-wallets. Primary data have been collected from 60 respondents using convenience sampling method through structured questionnaire method. The statistical tools viz percentage analysis, chi-square test and F-test have been used to analyse collected data. The results of the study shows that there has been no significant association between age, gender, preferable products/services of the respondents, their usage and opinion of mobile wallets. It has also inferred that security and instant payment system have been the significant factor to use digital e-wallets.

With the objective of explaining the adoption of mobile payment usage by MSMEs' customers using UTAUT model **Paddy Mugambe (2017)**¹⁹ has conducted a research with the data collected from a sample of 400 respondents using purposive sampling method in Uganda. The research paper have used both meta-analysis and primary data to decide the extent to which the UTAUT model has to be used. The result of the study has indicated that there has been a clear association found in some of the constructs that affect behavioral intention such as social influence, habit and facilitating conditions. It has also inferred that price value, effort expectancy and hedonic motivation has least significance.

Lisa Y. Chen and Wan-Ning Wu (2017)²⁰ have attempted to explore the factors affecting users' satisfaction with digital payments in Taiwan. Technology acceptance model has been used in the study to explore the effect of external variables. Using random sampling method 127 responses have been collected. The reliability and validity of the questionnaire have been calculated using Cronbach's coefficient. To verify the hypotheses descriptive method, pearson correlation analysis and regression analysis have been used. The findings of the study indicated that digital payment have many limitations in the course of its development. The study has also provided its insight on the factors that affect the users' satisfaction for digital payments.

With the view to discover the public perception on cashless transaction in India **Venkateswararao Podile and Rajesh (2017)**²¹ made an attempt to examine the impact of factors viz., convenience, security, costs, incentives and procedures on cashless transactions in India and technical factors including poor internet connectivity. A stratified random sampling method has been used for selecting 195 respondents in Andhra Pradesh. Percentage analysis and chi-square test have been used to statically analyse the collected data. The finding reveals that even though users are comfortable with cashless payments some have negative perceptions regarding the factors viz., security threats, network problem, high transactional costs and lack of users' knowledge on online payment services. The study has been concluded that government and the banking institutions should take necessary steps to enhance security and safety in digital transactions to make India a cashless economy.

Nidhi Singh, Shalini Srivastava and Neena Sinha (2017)²² in their article titled "Consumer preference and satisfaction on M-wallets- a study on North Indian consumers". The aim of the paper is to test the conceptual model of consumers' intention and contentment towards mobile wallets. Sample for the study have been collected from 204 respondents with the objective to examine the conceptual model of consumers intention and satisfaction for mobile wallets. Statistical tools employed in this study have been ANOVA, descriptive statistics, t-Test and regression analysis. The outcome of the result shows that there has been a strong relation between customers' perception, preference and satisfaction of mobile wallets. The result also shows there has been always an impact of customers' perception, satisfaction and preference on usage rate of mobile wallet in India.

With the aim of analysing the usage of PayTm **Abhijit Tadse and Harmeet Singh Nannade (2017)**²³ have conducted a study in Pune. Primary data have been collected from a sample of 151 respondents through a structured questionnaire .On the basis of age, usage, purpose and average spending on PayTm the respondents have been categorized. Descriptive method has been used as a statistical tool. The result inferred that payment applications has to increase the efficiency of the transaction and the services should satisfy the maximum customers. It has been also inferred that PayTm has been executing well in terms of security and privacy but transaction time, discounts/offers/coupons and innovations should be improved for customer satisfaction.

Jubair and Yakoob (2017)²⁴ have conducted an empirical study on the title “Acceptance of digital wallets in Kerala” with the objective to analyse the awareness on usage and issues of digital wallets. A sample of 200 bank customers have been selected based on multistage sampling technique from Trivandrum, Ernakulam and Malappuram districts. Percentage, figures, cross tab and chi-square test have been used to statistically analyse the data. The result denoted that digital wallet are equally acceptable among people with different educational level, employment status and income. It has been concluded that the Reserve Bank of India must take steps to standardize e-wallets and to ensure proper security and inter-operability among service providers.

Shamshier Singh (2017)²⁵ in his article titled “A study of consumer perception of digital payment mode”, made an attempt to explore the customer perception and impact of demographic factors on adoption of digital mode of payment. The study has been based on primary data collected from 150 respondents from Delhi. A well-structured questionnaire have been designed to collect the information from the respondents. Cronbach’s Alpha test has been used to find out the reliability of the data. The statistical tools employed in this study have been ANOVA and frequency analysis. The result has found out that demographic factor except education does not have much impact on the adoption of the digital payment. It has been also found that the possibility of acceptance of digital payment is much advanced in the areas/region where education level is high .It has also been revealed that the progress of users of smartphone and internet penetration in certain areas facilitated the adoption of digital payment.

Shamsher Singh and Ravish Rana (2017)²⁶ has made a study about the perception of the customers towards digital payment and the impact level of the demographic factors in adopting digital payments. For this purpose, primary data have been collected from 150 respondents from Delhi. Data have been analysed using statistical tools viz., ANOVA and descriptive statistics. The outcome of the study insists that there has been no significant difference in users’ perception based on demographic factors such as gender, profession, age and income whereas education has been found to have a significant influence for acceptance of digital payment. It is indicated that digital payment usage of the respondents has been influenced by the education level of the customer. It also articulates that there has been a growing trend in the smartphone and internet users.

Madhu Chauhan and Isha Shingari (2017)²⁷ have carried out the research study to identify the future of e-wallets from under-graduate perspective. A sample of 100 students from Delhi have considered for the study using random sampling technique. A structured questionnaire has been administered to the sample respondents to collect primary data for the study. Statistical tools mainly percentage analysis and descriptive statistics have been used to analyses the data. The result of the study has shown that youngsters have been using e-wallets frequently for all the payments and consider this mode to be more secured. Further, the study also reveals that people are inclined towards e-payments because of its convenience, ease of use, quick service and availability. It has been concluded that youngsters are contributing towards growth and success of making India Digital.

Shailendra Singh Rana (2017)²⁸ has made a study on the preference towards the mobile wallets among the university students in Lucknow city. The main objective of the study has been to identify the usage of mobile wallets, factors influencing the adoption of mobile wallets and the factors refraining the usage of mobile wallets. A structured questionnaire has been administered to collect data from the sample respondents. Statistical tools namely percentage analysis, descriptive statistics and chi-square test have been used to analyse the data. The notable observation of the study shows that majority of the respondents prefer wallets for recharge, followed by paying bills and transferring money. Time, place, avoidance of queue, instant refunds and payments have been the prime factors for the students to choose mobile wallets. The result revealed that majority of the students prefer cashless payments, but they are also concerned about security purpose. It has been further concluded that there has been a significant association between age and the opinion regarding the future of mobile wallet.

With the view to explain the application and usage of wallet money endorsed by different companies and various factors that affect the consumer's decision to adopt mobile wallet and challenges faced by the users, **Manikandan and Mary Jayakodi (2017)**²⁹ have made an empirical study on consumers' adoption of mobile wallet in Chennai city. Data have been collected from 150 respondents by using a structured questionnaire. Statistical tools viz., ANOVA and t-Test have been used to analyse the data. The result inferred that factor like brand loyalty, convenience of shopping plays an important role in

adoption of mobile wallet whereas security and safety of funds plays a challenging factor for the consumers. It has been concluded from the study that mobile wallet usage awareness has spread among the people in India due to government program on demonetization and there will be a huge growth in adoption of mobile wallet in the upcoming years.

Komal Chopra (2017)³⁰ has attempted to evaluate the attitude of unorganized retailers towards mobile payments. TAM and TPA model has been used to study the variables for identifying the users'. The study has been done in Mumbai city in India. The data have been collected after personal interaction with the following unorganized retailers such as grocery stores, milk vendors, vehicle repair shops and vegetable vendors. Data have been collected from 600 respondents. Friedman test and Kruskal Wallis have been used to statistically study the data. The findings indicated that privacy concern, trust and security are the main factors which determine acceptance and it is similar to those relating to technology adoption by customers and different to those relating to mercantile adoption of technology in other countries. It has been further concluded that study has vital implications in an emerging economy like India where demonetization has enabled retailers to move to cashless transactions.

Krishna Moorthy et al. (2017)³¹ have been carried out the research study to explore the factors to recognize the reasons for the less adoption of digital payment methods among Generation X in Malaysia. Innovation Resistance Theory (IRT) and Valence framework have been used to observe the barriers, including value, risk, tradition, image and cost hurdles. Primary data have been collected from 400 respondents using convenience sampling method through structured questionnaire method. The findings of this study shows that all barriers significantly affect the mobile commerce adoption except the cost barrier. Further, the result of the study encourages the local business to reduce the barriers and to develop the mobile commerce adoption in Malaysia. To reduce the cost barrier construct, extended innovation resistance theory model research has been used for the adoption intention of mobile commerce.

Gokilavani et al. (2018)³² have undertaken a study with the objective to find out the perception of consumers towards digital payment. Simple random sampling method has been used to collect data from 300 consumers in Coimbatore district statistical tools

employed in this study have been percentage analysis, ANOVA, t-Test and multiple regression analysis. It has been highlighted that half of the consumers have modest level of perception towards digital payment. Significant difference exists between perception of consumers which includes superiority, efficiency, safety and security, convenience, cost, time savings, protection of privacy of digital payments and their socio-economic status. It also has positive impact which influences the adoption of digital payments. It has been further inferred that digital payment system should be braced to improve safety and they must adopt suitable measures to overcome undue delay in its processes.

Satadruti Chakraborty and Dipa Mitra (2018)³³ have carried out the research study on consumers' intention to adopt digital payment services. The determination of the research study has been to discover whether customer demographics influence adoption behaviour and to understand whether the market can be segmented into several customer groups. Face to face and telephonic interview have been conducted to collect data from 150 respondents using random sampling method. Descriptive analysis, regression analysis, correlation analysis and cluster analysis have been used to statistically study the data. The study has identified that the digital wallet companies should have a better and clear understanding of factors that influence the decisions for adopting e-wallets by the Indian consumers.

Sudhir Babu and Lakshmi Narayanamma (2018)³⁴ have discussed about the perception and the problems faced by customers using digital payments. Primary data for the study have been collected from a sample of 221 respondents through a well-structured questionnaire using random sampling technique in Guntur. Frequency analysis and descriptive statistics have been used to analyze the data. The study depicted that most of the respondents agree that mobile wallet provides various advantages to individuals for purchase of products, improve the quality of decision, helpful in buying products as compared to traditional methods. The study has also disclosed that customers of different age groups have been using these services and they trust the service providers. It has been also recommended to create awareness about the significance and usage of digital payment methods.

With the objective of examining the perspective of youth towards e-wallet payment systems **Adharsh et al. (2018)**³⁵ have collected a primary data from 160 respondents from Amritapuri by using a structured questionnaire. Simple percentage analysis has been used for analysing the collected data. The results indicated that now a day's most of the youth use e-wallets due to its easy accessibility. Further it has been inferred that the organisations made maximum usage of the technology because of the several services provided. It is also observed that in order to maintain and strengthen the user base e- wallets firms provide quality services with more benefits and technical advancement.

Based on the secondary data collected through various literature, **Priyanka Kotecha (2018)**³⁶ has discussed about the paradigm shift in Indian banking system with reference to mobile wallet in Gujarat. The author has compared the specialized literature with the analysis of statistical data presented by several other authors. It has been found that M-wallets are expeditiously becoming the mode of mainstream online payment. The author has also noticed that the public are adopting mobile wallets at an incredibly prolific pace, primarily because of ease of use and convenience. It has been concluded from the study that there will be an enormous growth in adoption of mobile wallet in the upcoming years.

In their article titled "A study on consumers acceptance of mobile wallet" **Shivangi Jaiswal and Pankaj Joge (2018)**³⁷ have discussed about the application and usage of wallet money endorsed by different companies and several elements that affect the consumers' decision to adopt mobile wallets inspite of several risks and trials. Primary data have been collected from 150 respondents in Bhilai , Chhattisgarh. ANOVA has been used to analyse the collected data. The study reveals that the ease of transactions, secured profile, and convenience in handling applications set forth the benefits of e-wallet which is the need of the hour. It has been concluded that several business organizations namely banking, retail, hospitality etc., are making use of this digital mode and are expected to extend their view in other areas of operation.

With a view to explore the risk involved and satisfaction of customers of e-wallets **Lokinder Kumar Tyagi, Saurav Mehrota and Rishabh Agarwal (2018)**³⁸ made a study based on 100 respondents using convenient sampling method in Delhi and NCR. Data have

been collected using a structured questionnaire. Statistical tools namely percentage analysis and descriptive statistics have been used to analyse the collected data. The result indicated that most of the transactions done by the respondents are through e-wallets by using smartphone for buying home products. It has been further inferred that some of them are not aware about the digital wallets. The study suggested that it is important to enable passwords on user's device and to install applications from trusted sources.

Praiseye and Florence John (2018)³⁹ have explored the consumers preference towards mobile wallets. The study also traced the factors that affects consumer's preference towards the same. The data have been collected from 100 users of digital payment services in Chennai. ANOVA and frequency analysis have been performed on the themes regarding the factors that affect consumer preference and impact of demographic factors based on consumers preference. The result of the study has shown that mobile wallet usage has become more popular after demonetization. The study also reveals that internet problem and inconvenience caused while making the payment of two digits amount are the main challenges faced by the respondents. It has been suggested that financial literacy should be enhanced among the general public to adopt the latest innovation in payments technology.

In order to identify the factors affecting the adoption and its behaviour of digital payment service, **Sushil Punwatkar and Manoj Verghese (2018)**⁴⁰ conducted an empirical study on consumers' adoption behaviour of digital payment services from 115 respondents in Madhya Pradesh. It has been interpreted from the analysis that economic value, perceived security, privacy, technical know-how and intention to use have positive effect on the adoption behaviour of digital payment system. The study also concluded that the respondents have a positive and hopeful impact towards e-wallets. The result shows that there has been a perceived security on the gloomy factor affecting the consumers' usage of digital wallets.

Prasad Rajendra Byakod et al. (2018)⁴¹ have conducted a study on the current technical infrastructure and adoption status of digital payment systems in Nelamangala and Bidadi regions of rural Karnataka. Primary data have been collected from 200 respondents. A structured questionnaire has been administered to collect data. To arrive at the key difficulties in adoption of digital payment system statistical analysis has been carried out

using the collected data. The findings of the study implied that lack of training on use of digital payment system has been the main reason for less adoption of digital payment system. The study has also suggested that all the line division representatives like teachers, well-being specialists, town development officers should instruct the general population about the monetary consideration and digital payment system.

To evaluate the consumers' perception towards e-payment system and digital wallet **Akhila Pai (2018)**⁴² have conducted a study in Karnataka. The purpose of the study has been to identify top digital wallet service providers in our country and to explore consumers' awareness, perception, merits and demerits. The non-random sampling methods have been used to collect data from 120 users of digital wallets. It is inferred that digital wallets are getting popular among young people and majority of them have been using Paytm service. It has been further found that security threats have been the main obstacle in securing confidential information.

To assess the factors influencing youngsters and the challenges faced by them while using digital wallets **Gowtham Ramkumar (2018)**⁴³ has conducted a study in Chennai city. The data have been collected from 100 youngsters. Data have been analysed using descriptive statistics and factor analysis. The result of the study shows that difficulty in transferring money and inability to access are the highly challenging factors faced by the respondents. The study also revealed that Paytm has been the most preferred e-wallets and the offers and discounts has been one of the major promotional tools that motivates the respondents to prefer the same.

To measure the customers' perception regarding e-wallets in Ahmedabad city. **Mamta Brahmhatt (2018)**⁴⁴ has made a research study with the sample of 102 respondents. The primary data have been collected using a structured questionnaire. The collected data have been analysed using the statistical tools namely ANOVA, t-Test and chi-square analysis. According to the result of the survey, it has been found that the e-wallets are mainly used for mobile/DTH recharge purpose and for online shopping. The study has further suggested that the government can make it mandatory for all the respective authority viz., schools, colleges and other institutions to make fees payment and filing of IT returns compulsory with e-wallet to increase the growth rate of the same.

Miklesh Prasad Yadav and Madhu Arora (2018)⁴⁵ have made a study on the “Impact on customer satisfaction for e-wallet using PATH analysis”. For this purpose a sample have been collected from 351 respondents in Delhi using judgement sampling technique. The necessary hypotheses have been framed and AMOS graphic has been used for the validity of the formulated results. It has been inferred from the result that there has been a positive relationship of a customer satisfaction with solutions in e-wallets and negative relation with problems in using e-wallets.

Factors affecting the increase in users proportion and its importance in adoption of e-wallets in metro and tier-2 cities have been analysed by **Alaknanda Lonare, Anukriti Yadav and Samiksha Sidhu (2018)**⁴⁶. Primary data have been collected from 285 respondents using cluster sampling method. The collected data have been analysed using factor analysis, binomial logistic regression and TAM model. The result stated that the proportion of users in the metropolitan cities have been more compared to the tier-2 cities. It has been further observed that the adoption of e-wallet is much lesser among the vendors. The study suggested that more awareness must be created among the vendors population by the representatives and suitable measures should be adopted to satisfy them.

In their study, “E-wallet awareness and its usage in Mumbai”, **Bhagyashri Pachpande and Aakash Kamble (2018)**⁴⁷ have discussed the frequency and purpose of e-wallet usage after demonetization. The study has been based on the primary data from 150 respondents through a structured questionnaire using random sampling method. Data have been analysed using percentage analysis and descriptive statistics. The findings of the study revealed that in ease of use, quick online transaction and usefulness of e-wallets are the three major factors which play an important role in consumer adopting e-wallets. It has also further concluded that e-wallets are performing well in terms of privacy, transaction time, discounts, offers and customer satisfaction.

Yuanyuan Wang, Joo Hwan Seo and Woon-Kyung Song (2019)⁴⁸ have made a conceptual study on the significant factors that influence consumers’ preference for mobile payment. Data have been collected from 573 respondents in China using structural equation model to examine the mobile payment system based on the TAM. The study depicted that various factors viz., value of service, convenience, security and perceived usefulness have

an effect on users satisfaction. The study has also inferred that customer satisfaction is a significant factor that has a direct and positive impact on consumer purchasing. It has been concluded that this verified instrument will contribute further researchers to improve and enhance mobile-payment research models.

Muhammad Afiq Bin Mohd Syawani et al. (2019)⁴⁹ have made a study about the intention to use e- wallet among students in Polytechnic Shah Alam. The main objective of the study has been to examine self-efficacy and consumer technology anxiety, subjective norm and perceived norm. Primary data have been collected from 357 respondents. Descriptive statistics has been used to analyse the data. The result of the study highlighted that self-efficacy and subjective norms give more effect on the level of intention to use e-wallet. The study has also concluded that usage of e-wallet is still less and it should be improved to enhance the usage of e-wallets.

In order to find out the consumer attitude and intention to adopt mobile wallet in India **Deepak Chawla and Himanshu Joshi (2019)**⁵⁰ have done an empirical study. TAM and UTAUT model has been used to carry out the research. Primary data for the study have been collected from 744 respondents belonging to various urban and rural areas of India using convenience sampling method. PLS-SEM has been used to analyse the collected data and to test the hypothesized model. The result of the study concludes that factors viz., trust, perceived ease of use, perceived usefulness, security, facilitating conditions and lifestyle compatibility have a significant effect on the consumer attitude and intention to use digital payment methods. It also indicates that usefulness and trust have been significantly influenced by ease of use whereas trust, attitude and intention have been significantly influenced by perceived usefulness.

Vijai (2019)⁵¹, in his article “Mobile wallet and its future in India” have made an empirical study to understand the awareness, preferences ,problems faced by the consumers and the services provided by the e-wallet providers. The study have been conducted by collecting primary data from 100 respondents in Chennai. The collected data have been analysed using the statistical tool percentage analysis. The study has depicted that digital payment system supports financial institutions in India via mobile technology and it aids to develop their customers and its usage. It has been further inferred that if security issues

are decreased and tightened then the adoption of e-wallet services will automatically increase. The study also recommends to create awareness about the advantages of using mobile wallets.

With the objective of examining the customer perception and impact of demographic characteristics on adoption of digital mode of payment in Virudhunagar **Kamatchi Eswaran (2019)**⁵² has conducted a research. By using the simple random sampling technique 150 respondents have been chosen for the study. The information have been collected through a structured questionnaire. Using ANOVA and frequency analysis, primary data have been statistically analysed. The result of the study shows that the demographic characteristics except education does not have much effect on the usage of digital payment. It has been inferred that there has been no significant difference on the basis of age, gender, annual income and profession. It has been indicated that usage of digital payment is highly influenced by the literacy of the customer. The result revealed that transferring of money using applications has brought behavioral changes and helps in the usage of digital payment even in the rural areas .It has been finally concluded that there has been scope of developments in India that foreign investor's shows interest in investing in the digital payment industry.

Saviour (2019)⁵³, in his study on customer satisfaction of mobile wallet services provided by Paytm assessed the satisfaction level of 100 respondents from Nagercoil district using random sampling method. The collected data have been analysed by applying simple percentage analysis. The result of the study has shown that majority of the respondents are aware about the various services of Paytm and they use it in maximum extent. Further, the study also confined that after the demonetization Paytm has taken steps to increase its market share and it is also considered to be the most efficient and effective mobile wallet service providers in India.

Archana Bai (2019)⁵⁴ has conducted a study to understand consumer preferences towards mobile wallets and to identify the factors influencing the adoption of mobile wallet by consumers for their retail payment. The main intention of this has been to study the growth to identify the internal and external factors influencing the consumers and to analyze the contributing factors on consumer preference towards mobile wallets. Primary

data have been collected from 200 respondents using a purposive and convenient sampling method in Kanchipuram. The collected data have been analyzed using ANOVA and percentage analysis. The study reveals that services, safety and security are the most influencing factor to choose e-wallets. It has been concluded that e-wallet services have marked their own place in market. The result of the study has further revealed that service providers must adopt better marketing strategies in the future.

With the view to discover consumer adoption of digital wallet in NCR region and to find consumers attitude towards digital wallets and to compare adoption of consumers of digital wallet in NCR **Pooja Tiwari, Vikas Garg and Abhisek Singhal (2019)**⁵⁵ have done an empirical study. The data have been collected from 200 respondents using convenient sampling method. The statistical tools viz., ANOVA, regression, correlation have been adopted for the purpose of analyzing the data. The outcome of this study revealed that there exists a significant relationship between dependent variables (awareness about digital wallets, learning more about digital wallets, frequency of using it choice of wallets, preference over cards, security concerns, features motivate to adopt) and independent variables (age, gender, annual income, occupation, marital status and qualification).

To evaluate the customer satisfaction towards e-wallets in Tirunelveli district, **Lyrics Miruna (2019)**⁵⁶ have made a research study with 50 e-wallet users. The vital object of this analysis is to find out the most preferred e-wallet and to measure the satisfaction level of customers using e-wallets and the preference towards e-wallet has been measured using garrett ranking score and descriptive statistics. The result disclosed that the most preferred e-wallet has been Paytm and it has been further inferred that respondent are more satisfied with offers and discounts, followed by customer service, trust factor, transaction time and privacy concerns. It has been also suggested that a large awareness is required for rural people, the illiterate and elders.

Pasupathi and Reka (2019)⁵⁷ have studied customers' perception towards mobile wallets with special reference to google pay through sample data collected from 150 respondents in Tiruchirapalli. The aim of the survey has been to determine the various factors influencing customers towards google pay like perception, awareness and preferences. The statistical tools namely percentage analysis and chi-square test have been

collected to analyse the collected data. The result of the study has shown that the majority of the respondents are females belonging to 18-25 years and they use G-pay for financial transactions. The article has highlighted that it is important for G-pay to update technologies and remain cost-effective and customer friendly.

An attempt was made by **Nandhini and Girija (2019)**⁵⁸ to examine the customers opinion regarding the ease and hurdles of e-wallet and to find out the influencing factors that the customer prefers e-wallets over other mode of payments. Data have been collected from 150 respondents using a simple random sampling method in the Namakkal district. Percentage analysis, rank analysis, chi-square test and t-Test have been used to analyse the collected data. The findings indicated that the main purpose of using e-wallets has been for fund transfer services. It has been further inferred that network connection and security threats have been the major obstacles related to e-wallets. The study also suggested that more value-added services should be included since the usage of e-wallet has been the need of the hour in this digital era.

In order to find out the adoption behaviour and change in the daily transactions, **Gagandeep Singh (2020)**⁵⁹ has collected primary data from 640 consumers through questionnaire. Structural Equation Modeling (SEM) and Partial Least Square (PLS) technique has been applied to analyze data and formulate the results. The findings of the study have shown that security, easy to use, convenient method and no loss of personal information are the factors influencing the youngsters to use e-wallets for the purpose of mobile and DTH recharges, booking of movie tickets, bill payments, and money transfers. It has been further inferred that there is no significant relationship between gender and the use of e-wallets and it has been found that e-wallets have enhanced the performance of banking sector and able to attain the motive cashless India.

Ngoc Bich and Hai Ninh Thi (2020)⁶⁰ in their research article made a study about the Generation Z's Intention to use electronic wallet. The study analyse the reasons influencing the decision of Generation Z to adopt digital payment systems. The data have been collected from 170 respondents from Vietnam using quantitative method. SmartPLS has been applied to examine the framed hypothesis. The study reveals that there has been an indirect outcome among perceived trust, ease of use and social impact towards intention

to adopt e-wallet or both factors are facilitated by convenience, usefulness and reputation. It has been concluded that marketers can increase the various dimensions that have to be included in marketing campaigns to motivate Generation Z's adoption in electronic wallets.

Pavithra and Kanthisree (2020)⁶¹ in their article entitled, "Customer's adoption towards mobile based wallet apps a hostile to e-banking in India", have undertaken a study to evaluate the importance of mobile wallets. The study has been conducted in Chennai. Convenience sampling method has been used to collect the data from 320 respondents through interview method. SPSS and AMOS are the software that has been used for analyzing the data. Structural equation model has been used for the study. The study concluded that the comfort ability and customer adoption has a significant direct effect on customer adoption whereas security, trust and comfort ability have significant indirect effect on customer satisfaction. The model also anticipated that the intensity of adoption leads to enhanced customer satisfaction.

Hendy Mustiko Aji, Izra Berakon and Maizaitulaidawati Md Husin (2020)⁶² have conducted a study by observing the effect of perceived risk, government provision and perceived usefulness on customers' intention to use e-wallet during COVID-19 outbreak. Primary data have been collected from a sample of 259 respondents from Indonesia and 207 from Malaysia through a structured questionnaire using proportional sampling technique. Indonesia and Malaysia are the two countries considered as the two-worst countries in ASEAN affected by COVID-19. Structural Equation Modeling (SEM) and Partial Least Square (PLS) model have been applied to analyze the data using multigroup analysis. The result inferred that perceived risk and perceived usefulness directly affected intention to use e-wallets during COVID-19 outbreak. The study also highlighted that there have been difference between Indonesia and Malaysia in government support and intention to use e-wallets.

In order to investigate the factors influencing the intention to use mobile wallets of financial services providers, **Phyo Min Tun (2020)**⁶³ has conducted a study among 234 potential mobile wallet users in Myanmar, Thailand. The main aim of the study has been to fill up the gaps of previous research study in similar aspects relating to beliefs, societal quality and trust. SEM technique has been applied to analyze data and formulate

the results. The results of the study indicated that trust and perceived usefulness factors have been the vital influencing behavior intention to use a mobile wallet whereas, service quality, user satisfaction, facilitating conditions and social influence have been insignificant. It has been further inferred that the higher authorities in the financial service institution need to formulate the strategies and approaches for placing their mobile wallet among a suitable user base, thereby acquiring more mobile wallet users.

Anurag Gupta and Rydhm Beri (2020)⁶⁴ have made a conceptual study on adoption of e-wallets in educated society, for this purpose data have been collected from the people belonging to different educational background based on their media opted for online transaction. The study has compared the result obtained from different transaction medium mainly focusing on the non-usage of particular transaction mode. The study also discusses about the major problems often encountered by the respondents. It has been concluded that the initiative taken by the government of India on demonetization drive has contributed immensely towards awareness, usage and acceptance of online payment.

Fiteria Halim Efendi et al. (2020)⁶⁵, in their article focused on UTAUT model to discover the constituents driving interest in e-wallets among Generation Z. UTAUT refers to “United theory of acceptance” has been based on six main constructs viz., performance expectancy, effort expectancy, social influence, facilitating conditions, behavioral intentions and usage behavior. The foremost objective of the study has been to find out the behavior of Generation Z in using e-wallets. Data have been collected from 146 respondents. Purposive random technique has been used to collect the data. The findings of the study revealed that perceived ease of use, facility condition and social influence had a significant effect on the behavior of using e-wallet, meanwhile perceived usefulness had no effect on interest in using e-wallets.

To determine the specific factor that attracts customers to e-wallets, **Kasthuru Subramaniam et al. (2020)⁶⁶** evaluated the positive and negative impact among e-wallets users in present generation in Malaysia. Necessary data have been collected from 90 respondents using quantitative method through online survey. The study revealed that the convenience offered by e-wallets are attracted by the consumers and they face high security risk while using e-wallet. It has been disclosed that the older generation

prefers the traditional mode of payment because of its safety and security in spite of technological advancement. It has been further concluded that the usage of digital payments among younger generation has been raising immensely due to its convenient factors in this busy era.

In their article titled “Financial literacy about digital e-wallets: A comparative study of Gen X, Y and Z in India” have been made by **Ashlevi Mathew, Shilpa Elizabeth George and Akanksha Khanna(2020)**⁶⁷ using a convenient sampling method. The data have been collected from 103 Generation X, 105 Generation Y and 114 Generation Z respondents from Bangalore by administering an online questionnaire. Primary data collected from different generations have been analysed using Kruskal Walli’s test. On the basis of findings it has been observed that Generation X are firm and are not opened to adopt to any innovation. They prefer cash over digital wallets because of payment disputes and frauds. Result also disclosed that Generation Y are attracted towards rewards and other benefits by digital wallets and they are eager learners who are interested to adopt future innovation. It is further identified that Gen Z are the most comfortable in using e-wallet. They belong to the digital era where smartphones and internet has been pervasive and part of their daily routine. They prefer using digital wallet since it offers various benefits.

“The process of adoption interest in using digital wallet” has been the study undertaken by **Teresia Miranti Kesumastuti (2020)**⁶⁸ with an objective to analyse the process of forming an interest in adopting Go-pay. The study has been administered using a qualitative approach with a single case study method in Indonesia. A focused group discussion mode has been made for collecting data. It has been inferred that the informants have been interested in adopting Go-pay after going through the various phases of interest shown on different factors viz., awareness, interest, evaluation, trial and adoption based on online payment.

With the aim of analysing the consumer perceptions towards digital payment and to identify the impact of consumer perception **Somasundaram (2020)**⁶⁹ has conducted a study in Tamil Nadu. Primary data have been collected from a sample of 95 consumers. The data gathered have been tabulated and analysed using percentage analysis, F-test, chi-square test, regression analysis and factor analysis. Findings of the study revealed that

significant difference exists between perception of consumers towards digital payment and their demographic variables. Further, the study has indicated that digital payment system should be made simple and it should strengthen safety and security of financial transactions of consumers and measures should be taken to overcome delay in its process.

Cuong Nguyen, Trang Nguyen and Thao Tran (2020)⁷⁰ in their case study on “The determinants of consumer's intention to use e-wallet” have made an attempt to analyse the factors affecting the intent to use the MoMo e-wallet of consumers in Vietnam. Data have been collected from 280 respondents. Exploratory factor analysis and linear regression analysis are the research methods used for analysing the collected data. The findings indicated that there are various factors affecting consumer's decision to use MoMo electronic payment viz., efficiency, awareness of easy-to-use, social impact, perceived reliability and perceived cost. The study suggested certain recommendations for e-wallet to serve consumers’ needs to accelerate the development of the electronic payment industry.

Anju Singh and Aanchal Kalra (2021)⁷¹ have conducted a study to analyse the impact of mobile wallets security on consumer behaviour in Jaipur. The main aim of the research has been to find out consumers perception, attitude and security towards digital payments. The study has been based on the primary data collected from 315 respondents through a structured questionnaire. Data collected have been analysed using multiple regression and ANOVA. The study has highlighted the difference in the opinion of the consumers based on age. It has been concluded that security issues and consumer attitude towards digital payment system varies as per the age of the respondents even though the security issues are concerned by all age groups.

To explore the consumer’s perception of digital payment methods in times of covid pandemic and to analyse the impact of demographic factors **Siby (2021)**⁷² have collected a sample of 107 respondents in Kerala. Primary data have been collected using a well-structured questionnaire and analysed using ANOVA and correlation. The result of the study depicts that there has been no significant variance in consumer perception of digital payment methods even in times of covid pandemic based on the significant demographic factors viz., gender, age, education, profession and employment. The study

has been also concluded that high digital literacy and easy accessibility of the internet has played a major role in the revolution of digital payment methods even during the pandemic in Kerala.

Although numerous research studies have been carried out on adoption, satisfaction, perception and awareness of e-wallets and various e-wallets service providers. There has been no study undertaken on the comparative generation analysis on users' perception and their satisfaction on e-wallets in Coimbatore city. Hence, the purpose of this research is to address some of the inadequacies in the literature by investigating Generation Y and Generation Z users' perception and satisfaction of selected e-wallet service providers, viz., Paytm, Free charge, Oxigen, Mobikwik, Citrus, Phone pe, Amazon pay, Airtel money and Jio money.

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