Ozuem, Wilson ORCID logoORCID: https://orcid.org/0000-0002-0337-1419 and Naeem, Muhammad (2021) The role of social media in internet banking transition during COVID-19 pandemic: Using multiple methods and sources in qualitative research. Journal of Retailing and Consumer Services, 60. Art 102483. doi:10.1016/j.jretconser.2021.102483

The role of social media in internet banking transition during COVID-19 pandemic: Using multiple methods and sources in qualitative research

Muhammad Naeem, Wilson Ozuem

Abstract:

Social distancing practices and staying at home have increased the time people spend on social media with the purpose of exchanging and consuming information about completing their routine practices safely. The Covid-19 pandemic has disrupted in-person banking operations and increased the physical threat for both retail bankers and customers. Consequently, the world has moved toward internet banking with the purpose to continue routine transactions for paying bills, purchasing groceries, and shopping of brands. The present study aims to explore how the fearful environment of Covid-19 pandemic increased the social practices of internet banking and what challenges are faced by different customers during their use of internet banking. By understanding these experiences, system developers and marketers can improve their internet banking apps to address the needs and expectations of different customers. The study has opted for a relativist ontological position and social constructionist epistemological position to understand different realities in the same context and how customers experience internet banking in a fearful environment. The study used multiple qualitative research methods: Gibbs reflection cycle, semi-structured interviews with internet banking users, and focus group interviews with executives of public and private sector banks. Social actors through social media played a role with respect to understanding the nature of uncertainty during Covid-19 pandemic that changed customers' behavior from traditional banking to internet banking. Information was shared through social media to avoid ATMs, debit and credit card exchange with cashiers, and cash exchange as these are no longer safe options for both bankers and customers. The major theoretical contribution of this study is to merge social practice theory and affordance of technology theory in the context of internet banking adoption. This study has discussed practical implications for marketers and system developers of retail banks.

Keywords: Covid-19; Retail banks; Social practices; Experience; Expectation; Marketers; System Developers

1. Introduction

Existing research on internet banking suggests that internet banking is relatively new in developing countries compared to the developed world (Abbasi et al., 2017; Rahi et al., 2019). For example, out of 200 million population of Pakistan, only 3.1 million are registered internet users, which highlights a very low adoption rate of internet banking (Rahi et al., 2020). Prior research highlighted causes of low adoption rate of internet banking in Pakistan, such as weak legal system, high poverty, corruption, high cybercrime, low trust (Akhlaq and Ahmed, 2013), low literacy rate, disheartening experiences, low internet accessibility and high electricity shortfall, high resistance to adoption of new technologies (Abbasi et al., 2017), low security, and high uncertainty (Rahi et al., 2019, 2020). Other studies reported that technology adoption and acceptance is low in Pakistan due to low financial performance and privacy risks (Anwar et al., 2020; Khan et al., 2018). It was found that low knowledge and awareness can negatively influence intention to use telebanking; therefore, more training programs are required to educate customers in developing countries, such as Jordan (Alalwan et al., 2016, 2018; Chauhan et al., 2019). In Malaysia, approximately 50% of the population have adopted internet banking, which is relatively low compared to developed countries, such as the USA (Amin, 2016; Yuen et al., 2015). In Tunisia, high fallibilities and vulnerabilities, such as economic and political instability as well as low accessibility to internet banking, have negatively influenced customer attitudes and adoption rate (Chaouali et al., 2017). Most of the existing literature on internet banking in Pakistan highlights the causes of low internet banking adoption (Anwar et al., 2020; Khan et al., 2018; Rahi et al., 2019, 2020), but this study aims to understand how the fearful environment of COVID-19 pandemic forced people to adopt internet banking as a social practice as well as the challenges customers faced

---

Nomenclature

IB   Internet banking
SPAOT   socially practiced affordance of technology model

Due to cultural differences between developed and developing nations (power distance, individualism, and uncertainty avoidance), the perceived credibility of internet banking is very low in developing countries (Yuen et al., 2015). Extant literature on internet banking adoption highlighted that internet banking is one of the most underutilized channels, even after a decade in India (Marakarkandy et al., 2017; Patel and Patel, 2018). Only half of India's population are active internet banking users, which is far less than in other countries, such as China (Patel and Patel, 2018). In India, customers who love to use in-person banking and ATMs showed more resistance toward internet banking adoption (Gupta and Arora, 2017). Negative perceptions of external risks, such as privacy risk, social risk, information risk, financial risk, and performance risk, decreased Indian bank account holders' behavioral intention to adopt internet banking (Gupta and Arora, 2017). More research is required to identify issues in the use of online banking from customer and service provider perspectives, especially in developing countries (Alalwan et al., 2016, 2018).

Both readability and accessibility are some of the common issues which have decreased the adoption rate of internet banking in both Pakistan and India (Rahi et al., 2020; Sharma et al., 2020). Furthermore, the literacy rate in developing countries is very low, which negatively influences the adoption rate of internet banking (Rahi et al., 2020; Sharma et al., 2020). Existing literature on internet banking suggests that internet speed, IT infrastructure, and accessibility are prominent issues among developing countries (Alalwan et al., 2016, 2018; Chauhan et al., 2019), but there is clear evidence that fear of COVID-19 has significantly shifted the population of Pakistan from traditional banking method to digital banking method (Ahmed, 2020). For example, one of the well-known Pakistani banks (Habib Bank Limited) revealed that internet banking use in 2020 increased by up to 90% compared to 2019 due to fear of COVID-19 (Ahmed, 2020). In the presence of low literacy rate, readability issues, and challenges of IT infrastructure, the present study aims to explore how the fearful environment of COVID-19 pandemic increased the social practices of retail internet banking and the challenges faced by different retail customers during their use of internet banking in Pakistan.

After understanding these challenges, retail bankers and system developers can improve the services of internet banking apps to address the needs and expectations of different customers. Determining which communication channels have been used to educate and motivate customers to increase the social practices of retail internet banking during COVID-19 pandemic is of great interest. This study intends to offer a framework of social practices of internet banking adoption that can highlight the important factors which can increase the internet banking adoption rate, especially in developing countries.

2. Literature review

The use of social media has become social practice within customers' lives; therefore, retail bankers are increasingly focused on connecting and engaging with their customers via social media to understand their needs and expectations (Mitic and Kapoulas, 2012). The extensive use of social media provided more opportunities for banks to engage with customers to receive quick feedback and improve quality of services (Hansen et al., 2018; Shaikh and Karjaluoto, 2018). The nature of social media is participative, interactive, and collaborative; therefore, retail bankers have more opportunities to motivate and educate their customers (Mitic and Kapoulas, 2012; Durkin et al., 2015). On the other hand, low control over content, lack of standards and safety regulations, and information privacy issues are some of challenges that can decrease the effectiveness of social media use for increasing the level of retail banking adoption (Mitic and Kapoulas, 2012; Durkin et al., 2015). The level of social media and internet banking use, level of education, awareness, trust, and risk perception vary between countries and cultures (Hansen et al., 2018; Shaikh and Karjaluoto, 2018); therefore, the drivers of social media use and retail internet banking adoption vary between developed and developing countries. More exploration is required with respect to how social media networking can enhance awareness and knowledge about internet banking adoption in a developing country (Shareef et al., 2018) where the literacy rate is low and there is more resistance to adopt internet banking than in developed countries (Abbasi et al., 2017). This study has provided summary of existing studies on internet banking/technology adoption in developing countries (See appendix 1).

According to Wen et al. (2005), severe acute respiratory syndrome (SARS) brought changes to consumer behavior as they became more concerned about public hygiene and life risks. The COVID-19 pandemic led to lockdowns, social distancing practices, and the use of social media for information sharing and seeking for timely decision making (Apuke & Omar, 2020; Islam et al., 2020a). These social distancing measures and lockdown increased the technology adoption rate because people sought to avoid infection during global pandemic (Akpan et al., 2020). Evidence and information sharing through social media increased anxiety and stress among people and, as a result, unusual customer behavior was seen during COVID-19 pandemic (Kim et al., 2020), such as extensive use of online banking for online panic buying of groceries (Ahmed, 2020; Reuters, 2020). According to Laato et al. (2020), the global pandemic created significant changes in consumer behavior that influenced the services of grocery stores, cafeterias, convenience stores, restaurants, suppliers, and service providers across the world. The fear and stress of infection shifted rational consumer behavior to unusual behavior, such as extra buying of soap, face masks, and hand sanitizer to avoid health risks (Laato et al., 2020; Prentice et al., 2020). However, there is a lack of evidence of how the fearful environment of COVID-19 increased the social practice of internet banking, especially in countries where literacy and adoption rate are low compared to emerging countries and developed world.

Extant studies on internet banking adoption conducted in developing countries have used the Technology acceptance model (TAM) (Akhlaq and Ahmed, 2013; Abbasi et al., 2017; Alalwan et al., 2016; Chauhan et al., 2019; Marakarkandy et al., 2017; Patel and Patel, 2018; Shareef et al., 2018). However, the factors of TAM usually cover customers' perceptions instead of customers' real experiences (Hanafizadeh et al., 2014; Roy et al., 2017). Customer experiences within developing countries related to internet banking adoption were investigated in normal circumstances (e.g. low stress, low fear, and lack of health risks) (Alalwan et al., 2018; Makanyeza, 2017). There is limited literature available with respect to how information sharing through social media increased the fear and stress about health risks, which led to an increase in the social practice of internet banking adoption in a country where digital competencies, accessibility, and awareness about internet banking are low. Digital skills, literacy, and the availability of internet and digital devices can enhance customers' behavioral intention to use online banking (Sharma et al., 2020). Most existing studies used a positivistic approach and quantitative methods in their internet banking adoption studies (Amin, 2016; Chaouali et al., 2017; Omoregie et al., 2019; Sharma et al., 2020), but they cannot provide in-depth understanding about how people draw different meanings from the same information shared over social media channels about banking services and COVID-19. As a result, this study intends to use multiple qualitative methods with the purpose to develop a framework of social practices of internet banking adoption during global pandemic.

Social practice theory (SPT) provides comprehensive descriptions about the social world as well as how it transforms; however, it is not a single theory (Schatzki, 2001; Nicolini, 2012) but a sum of accounts on how social life works with social practice at its center (Schatzki, 2011). This study has applied two theories – SPT developed by Reckwitz (2002) and affordance of technology by Gibson (1979) – with the purpose to understand people's experiences and expectations which may be helpful to improve the adoption rate of internet banking in developing coun-tries. Reckwitz (2002) explained that social practices include all daily activities, such as working, taking care of others, and cooking, which can bring the best solution to routine practices. Furthermore, the routine use of social media for information exchange has become popular social practice in our society. For example, social distancing and lockdown practices increased the use of social media for information sharing (Apuke & Omar, 2020; Islam et al., 2020b); as a result, more people used internet banking to avoid the health risks associated with in-person banking. According to Tran (2020), the health risks and fear of COVID-19 increased the routine use of online e-commerce platforms with the purpose to conduct online transactions. The fear and stress of COVID-19 promoted the routine use of online banking across the world (Moṣteanu et al., 2020).

SPT has three elements: meanings, material, and competences (Røpke, 2009; Shove et al., 2012). Meanings refers to emotions, understanding, beliefs, motivation, and ideas (Røpke, 2009; Shove et al., 2012), which are specifically related to individual or collective social acts. Material means objects, infrastructure, tools, and hardware (Røpke, 2009; Shove et al., 2012), such as the use of social media which can promote information sharing and experiences supporting the adoption of internet banking as a social practice to maintain social distancing during COVID-19 pandemic. Competencies means specific skills and knowledge that can improve internet banking users' experiences. For example, there are many studies that highlighted that older individuals prefer to use in-person banking but COVID-19 forced them to shift to-ward internet banking (Marous, 2020) whether they had the specific skills to use internet banking or not. The affordance of technology theory is about the possibility of something (Gibson, 1979), for example, what is the particular value that can be achieved after using a specific tech-nology. It can be argued that affordance is about the compatibility of technology in the context of material and competencies of internet banking users. Based on this literature review, this researcher has con-structed a theoretical research framework given below (see Fig. 1).

3. Methodology

For this research, the inquiry paradigm involves a constructivist research approach that recognizes a subjective epistemology and relativist ontology. The ontology depends over constructions of human beings that are somehow true or not in an absolute sense, however, are less sophisticated and informed. According to relativists, the same reality is experienced differently by different people because they belong to different social classes and ethnicities (Goertz and Mahoney, 2012; Boghossian, 2006). This is main reason behind the adoption of relativist ontology as a philosophical position for this research, so that a better understanding can be obtained about how people draw different meanings from the same information shared over social media channels about banking services

and Covid-19. Constructivist epistemology holds that "knowledge is developed through interactions between the researcher and respondent … results are created through consensus and individual constructions … reality is locally constructed and based on shared experiences" (Howell, 2016, pp. 40–41). To understand the meanings of social classes and language is parallel to social constructionism as social constructionists perceive that the social construction of knowledge takes place in a particular social context (Griffith, 2018).

These epistemological and ontological positions were strengthened by a qualitative constructivist methodology including dialogue between participants and researcher (Hadwin et al., 2011; Gioia et al., 2012). According to constructivist qualitative research, "final interpretative theory is multi-voiced and dialogical. It builds on native interpretations and articulates what is implicit in those interpretations" (Guba and Lincoln, 1994, p.120). Constructivist qualitative research methodology offers an in-depth understanding about social descriptions of humans as well as of their cultural basis. Therefore, this research has adopted social constructionist epistemology as a philosophical position to gain better understanding about information sharing and how people ascribed different meanings to Covid-19 and internet banking.

4. Data collection methods

In order to collect qualitative data, this research utilizes three distinct types of qualitative data collection methods: Gibbs reflection cycle, semi-structured interviews conducted with customers of private
and public banks, and focus group interviews conducted with managers of public and private banks. Data were collected over a period of seven months using these three data collection methods. These qualitative data collection methods are used to gain a better understanding of customers' experience and expectations of internet banking with the purpose to improve their behavior toward internet banking. The Fig. 2 has devel-oped with the purpose to provide explicit understanding about the research process used for this study.

Gibbs (1988) developed a well-known reflective cycle that facilitates learning from experiences. His proposed reflective cycle aims at iden-tifying and understanding the positive or negative experiences (Gibbs, 1988). Schon (1983) defined reflection as an ability to learn continuously from others' experiences. For this study, Schon's (1983) proposed definition is used to understand and utilize the reflection cycle. Gibbs's model includes six stages, however, only four stages were selected for this study in order to fulfil the proposed study's objectives. The four selected stages are: (1) description, (2) feeling, (3) analysis and evaluation, and (4) action plan.
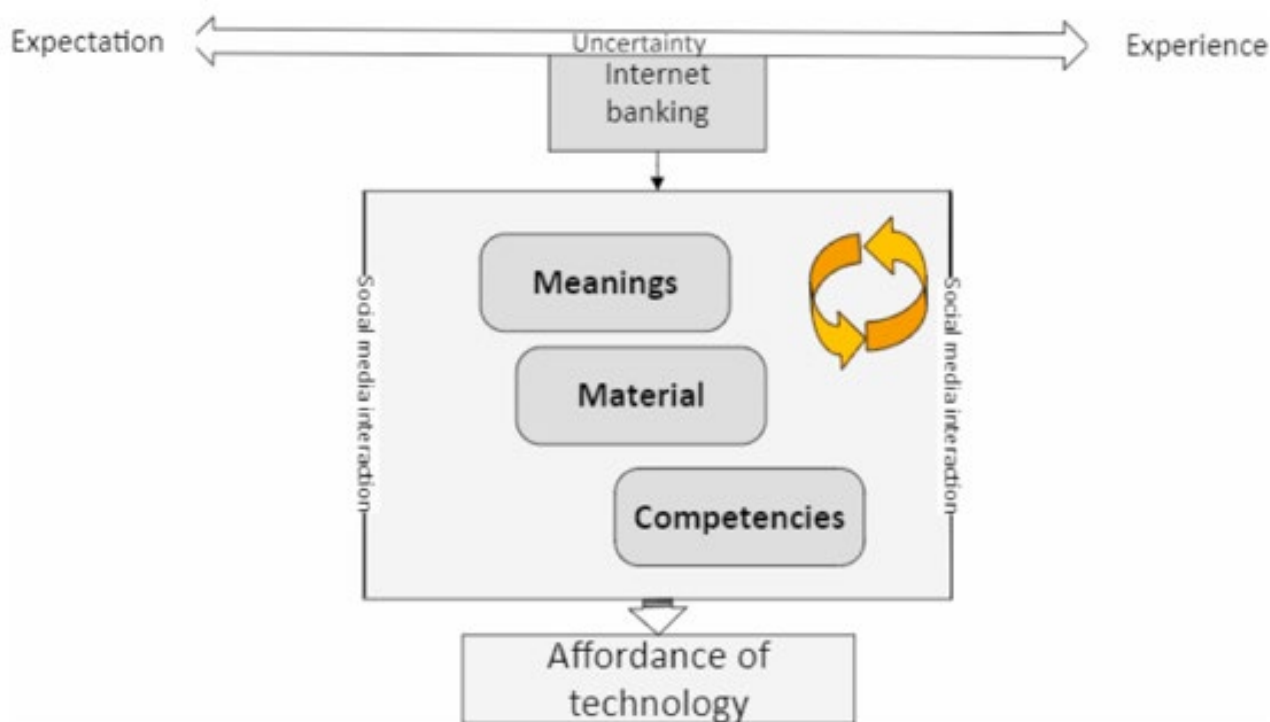
Fig. 1. Theoretical framework.

The first stage is description stage that involves identifying customers' existing knowledge about internet banking. The second stage is feelings stage that involves identifying actual emotions regarding usefulness and ease of usage while using internet banking. The evaluation and analysis stage reflects customers' real experiences that are positive or negative depending on their expectations about internet banking. The future action plan is the last stage that reflects what suggestions and improvements are provided by customers after using internet banking, and whether they want to utilize it in future or not.

Fig. 2. Research process.

While utilizing Gibbs's reflective model, it is assumed that the researcher can play the role as outsider. In contrast, the researcher plays the role as insider while conducting interviews and focus group with customers and managers of banks. The mixture of outsider while using Gibbs's reflective model and insider while conducting semi-structured interviews may allow the researcher to capture bias-free in-depth in-sights regarding customers' behavior about internet banking.
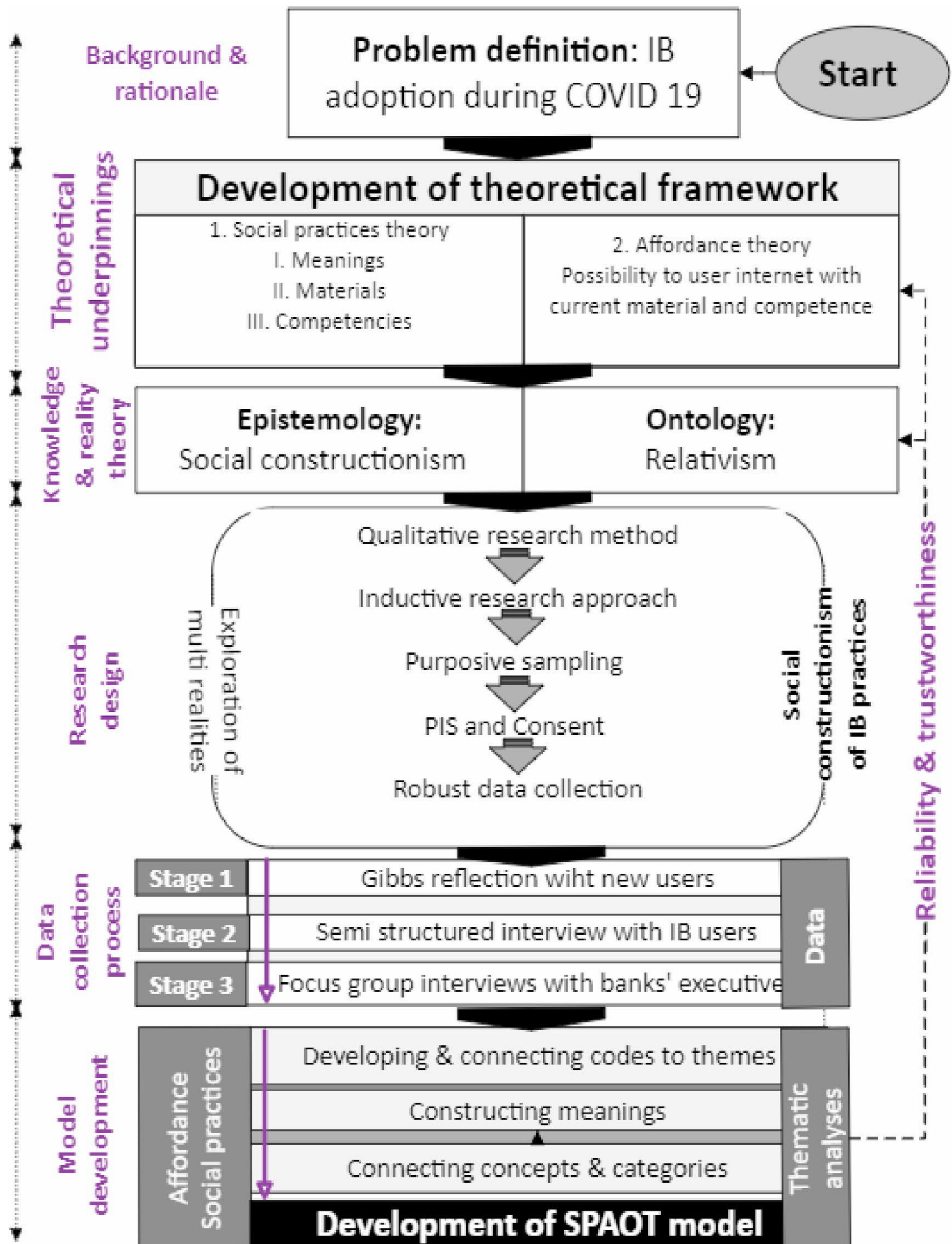
The focus group interviews include two key techniques that qualitative studies generally use, namely individual interviews and participatory observation (Ravitch and Carl, 2019). Howell and Annasingh (2013) suggested that researchers conduct focus group interviews if they want to get access to life stories and opinions of people during a particular situation. A focus group interview is considered the most appropriate method when it is required to deal with discourse within which research participants' images are continuously reproduced as "Other" (Madriz, 2000); therefore, the present study conducted focus group interviews with the executives of retail banks.

The third data collection technique is semi-structured interview as it allows a significant level of respondents' participation in the entire research process. In fact, "researchers have realized [for] quite some time that researchers are not invisible neutral entities; rather they are part of the interactions they seek to study and influence as well as observe those interactions" (Fontana and Frey, 2000, p.663). This statement supports the line of reasoning of the current study that the real experiences of customers are a key reflection of the multiple realities of internet banking use, whereas bank executives are a major source to verify and conceptualize these shared realities.

In this study, the drawn sample comprises 46 banking users and 20 bank executives (see Appendices 3 and 4). This is parallel to qualitative studies in which data saturation is reached prior to the 30th interview (Ringberg et al., 2007; Holloway and Beatty, 2003). To arrange socially distanced interviews, the social network of the researcher and bank managers helped to identify participants who had some experience of social networking technologies and knowledge about internet banking. With the help of the initially selected bank managers, customers and bank managers from rural and urban areas were asked for their volunteer participation in interviews. This sampling technique is similar to the snowball sampling technique which was used by previous studies (e.g. Azemi et al., 2019; Ringberg et al., 2007). Also, the researcher reached some bank managers through social media (e.g. Facebook and Twitter), and then contacted them through reminder emails, particularly those participants who had not yet confirmed an interview schedule by either telephone or Skype. Telephonic and Skype interviews were useful to maintain social distancing practices during COVID-19 pandemic. The selection criteria for participants in the study were that online banking users must have experienced online banking within the 2–3 months before the interview, whereas bank executives must have 5 years or more banking experience. The same approach was taken in other studies on internet banking (e.g. Azemi et al., 2019; Ringberg et al., 2007; Patten et al., 2020).

Interviews with online banking consumers and bank managers lasted about 1 h and 30 min, respectively. This time duration is parallel to Robson's (2011) suggestions. The researcher used Skype video
conferencing method for conducting focus group interviews with selected bank managers, given that they were readily available within their offices at interview time. Tulving and Thomson (1973) stated that this resonates with encoding theory, according to which surroundings facilitate participants in recalling their past experiences. To conduct the focus group interviews, a natural setting was preferred in accordance with participants' choice, for example offices inside banking environment. The researchers developed interview questions on the basis of experiences and expectations of customers in relation to technology, which is a way to reach episodic memory and induce complementary insights (Maxwell, 2013). While identifying the activation of episodic memory within a person's neurocognitive memory system, Tulving and Thomson (1973) described it as happening in interviews that ask about ordered and specific occasions (Maxwell, 2013), likewise expectations and experiences of customers about internet banking. Researchers constructed all interview questions in the past tense in order to ensure complete collection of data and to use tactical questions when required. The former takes it point of reference from suggestions that Maxwell (2013) provided for recalling past events. For the latter, tactical questions are the most recommended form of questions whenever it is difficult to manage participants (Diefenbach, 2009). Tactical questions are, in fact, a summary of initially asked questions and are useful to handle the abovementioned risk. The researchers' experiential knowledge and shared culture with internet banking customers and bank managers meant that it was not difficult to reword questions.

Interview questions of different forms optimize customers' conversation on the subject of internal generalizability (data generalizability in research setting) (Howell, 2013). In line with social constructivism, this study acknowledges internal generalizability through the data collected from different participants in context of age, occupation and gender (Quach and Thaichon, 2017; Felix et al., 2017). This study had 17 female participants and 29 male participants of different backgrounds with ages ranging from 19 to 50 years (see Appendix 4). Furthermore, 15 bankers were selected (see Appendix 5 for details). Although the sample comprises a larger number of male participants, no screening interview question was used that may have intentionally demographically influenced the diverse sample. Thus, the study posits that the bank managers and online banking users were true representatives of internet banking expectations and experiences. The participants were provided with verbatim transcripts for cross-examination so that data validity could be enhanced to support internal generalizability.

Generalizability of data beyond the study setting is possible only when phenomena are investigated across different units, and when one unit has similar theoretical foregrounds regarding other contexts (Maxwell, 2013). Internet banking users of Islamabad and Lahore as well as of rural areas differ socio-economically from internet banking users in developed regions. As they have somewhat limited internet banking experience and belong to lower-middle income group, they pursue internet banking to improve their living standards and to benefit from the opportunities of an open market. The financial sector, particularly internet banking, is the main economic development generator in Islamabad and Lahore; it is experiencing fast development and growth toward attaining maturity within developed markets. With the development of the internet, it is acknowledged that online customers influence the perception of others (Chang et al., 2015; Trainor et al., 2014; Zhuang et al., 2018). This supports the similarity of online banking users in Islamabad and Lahore with respect to other contexts.

5. Thematic analysis approach

This study used thematic analysis to synthesis the data and consulted leading papers on online services in which social constructionism has been used (Aslam et al., 2018). Researchers organized the data in verbatim transcripts of 191 pages and then analyzed the data in a process of three phases. Firstly, responses of customers of internet banking were analyzed; afterward analysis of responses of bank managers was
completed. After identifying the words that were most repeatedly used during the interviews, the words were iteratively visited in order to group them in codes. Then, themes were assigned to these codes on the basis of the meanings they exposed. Secondly, the researchers further analyzed the words in relation to customers' different responses that, in turn, produced social practices of internet banking. Thirdly, customers' and bank managers' experiences were integrated in order to disclose a holistic view of failure-recovery phenomena as a mutual experience between customer and services provider.

Researchers observed voice tone, gestures, and words selected by participants. This approach provided in-depth insights into the development of social practice of internet banking experienced through three structured stages: information sharing, mediation process, and coping mode. The interviews were both audio and videorecorded with permission of participants so that sense could be made of the nonverbal language of participants by moving backward and forward through the recordings. This also supported the

analysis of the narratives created through interview questions. Similarly, data from researchers'
observations was also an integral part of the analysis of participants' responses to interview questions. This is a better approach than the traditional analysis approach of ethnographers in the sense that analysis of observations of phenomena did not differ from analysis of data produced from interviews. Moreover, this is also parallel to Malefyt's (2015) findings according to which "language in ethnographic studies throughout client documentation define[s]" the construct of the researched phenomenon (P. 2498). Generated themes and codes are thus integrative of data generated

from focus group and interviews as well as researchers' observations. The Fig. 3 has developed with the purpose to provide explicit understanding about the thematic analysis process to develop social practiced affordance of technology model (SPAOT) (Fig. 4).

6. Trustworthiness of qualitative findings

Quantitative studies use validity, objectivity, and reliability to ensure the trustworthiness and rigor of quantitative findings, whereas qualitative studies
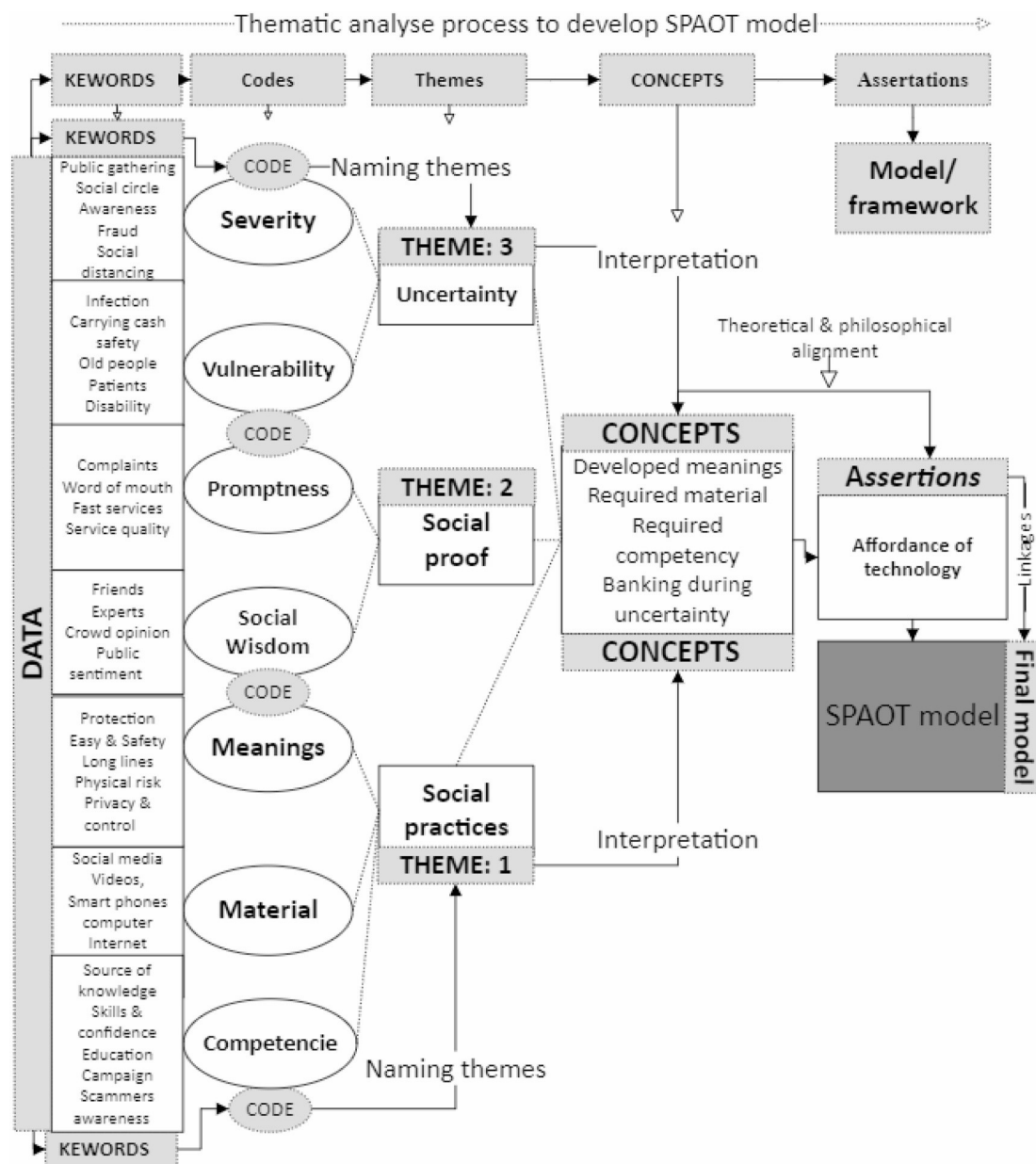

Fig. 3. Thematic analysis process to develop social practiced affordance of technology model (SPAOT). (Source: 'author')
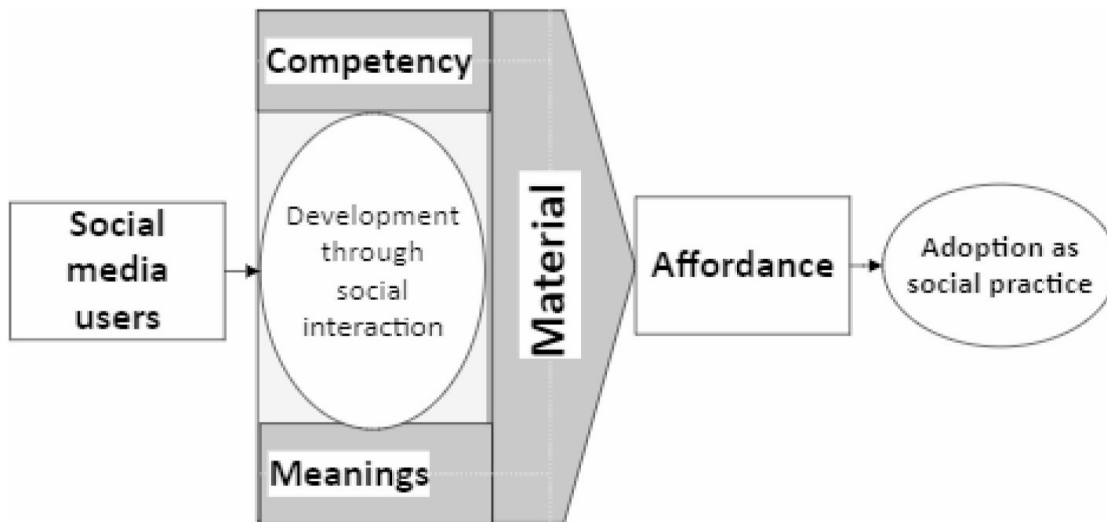
Fig. 4. Adoption as a social practice. (Source: Author)

qualitative studies employ transferability, dependability, credibility, and confirmability to maintain the trustworthiness and rigor of qualitative findings (Guba, 1981; Schwandt et al., 2007). According to Lincoln and Guba (1982), "*internal validity should be replaced by credibility, external validity by transferability, reliability by dependability, and objectivity by confirmability*" (p.3–4). Qualitative studies are conducted on the assumption that there is no absolute truth and there are multiple realities therefore qualitative findings are not generalizable (Anney, 2014). However, transferability, dependability, credibility, and confirmability are the methods used to ensure validity and rigor of qualitative findings (Anney, 2014; Cope, 2014). According to Bitsch (2005), a thick description of the research process can increase the transferability of qualitative findings. For example, Fig. 2 (research process) and detailed justifications for each qualitative data collection method increased the transferability of this study. Dependability means that either the participants or researchers can evaluate the recommendations and interpretation of the qualitative findings which must be stable over time (Bitsch, 2005). For example, the researchers of this study evaluated the qualitative data multiple times to ensure the trustworthiness of recommendations and interpretations of the qualitative findings. Furthermore, the use of Gibbs cycle and semi-structured interviews ensured the confirmability of qualitative findings. The credibility of findings can be enhanced when a researcher uses multiple qualitative methods with different participants (Anney, 2014). For example, this study employed the Gibbs cycle, semi-structured and focus group interviews with different participants to ensure the credibility of qualitative findings.

7. Main theme 1: social practice of internet banking

7.1. Code 1: meanings

Keywords: Covid-19, easy, safety, long lines, physical risk, cash, event, protection motivation, physical visit, privacy, getting control.

Many health experts and other experts shared messages through social media that physical touch and exchange are very risky as they can increase chances of spreading infection; so, banks have reduced operational hours for lobbying activities with the purpose to motivate customers to use internet banking. For example, bank manager 5 shared during focus group interview that "*many businessmen and older people usually visit branch for deposit and withdrawal of cash, which is not a safe option, so we launched a campaign on social media for people awareness.*" Some people asked their social network through social media how they are dealing with routine transactions and they shared videos on how to use internet banking. For example, customer 10 highlighted "*my close network shared videos about how we can use internet banking, which is better than getting Covid-19 during visit to bank.*" People have started to search options of banking which can help them to maintain social distancing practices and protect them from getting Covid-19. Internet banking is the best option as it facilitates banking transactions from home using smartphones, laptops, and tabs through the apps of internet banking, therefore, there is less risk involved compared to use of ATMs and in- person visits to a branch of a bank.

7.2. Code 2: material

Keywords: YouTube, videos, WhatsApp, smartphones, iOS system, mobile, computer, internet.

Material means objects, infrastructure, tools, and hardware which can influence the behavior (Røpke, 2009; Shove et al., 2012) of either an individual or group toward internet banking adoption. Material is all about the infrastructure, like what is the specific infrastructure that is required to use internet banking apps on mobile phones, such as specific mobile, screen size, internet, and type of system. For example, customer 18 shared "*I bought smartphone to use internet banking during Covid-19 as my previous mobile is not supportive for internet banking.*" There are many internet banking apps which are not compatible with

Android and these apps usually require iOS operating system. Covid-19 increased customers' intention to buy and use technology which can help them to use internet banking, like the customer who bought a smartphone because an internet banking app can operate on iOS. The use of social media and close network helped to enhance dissemination of information about how to use internet banking. For example, customer 27 said *"I don't know how to create login for internet banking so my close one shares YouTube videos to get help about different stages."*

Some people shared that their friends gave all understanding through WhatsApp during social distancing of Covid-19 so that their family can feel and live in a safe and secure environment. For example, customer 19 shared *"I got much help from WhatsApp friends to start online banking to keep me safe."* Some managers have shared that their customers are from lower education group therefore they have developed an internet banking app and website in both Urdu and English. They also shared tutorial videos on their website and social media to increase people's awareness. It is evident that Covid-19 played a significant role in pro-moting digitalization in retail banking. For example, bank manager 1 told during focus group interview that *"we have developed internet banking website and app in Urdu language to offer convenient services and we also guided people through videos how to operate it."* On the other hand, it was also found that some particular geographical areas do not have good internet service due to bad weather, construction sites, or other reasons, therefore, people experience complications during internet banking use. For example, bank manager 15 told during focus group interview that *"we have internet banking, but internet service is not good due to developments and weather issues which are major problems for giving error-free services."*

7.3. Code 3: competencies

Keywords: source, knowledge, skills, confidence, education, scammers, campaign, awareness.

Competencies means specific abilities, skills, and knowledge which help to perform social practices of technology adoption. For example, some customers do not have enough knowledge and skills to start internet banking but their close ones, especially members of their family, helped them to start and use internet banking. They cannot share financial information even with close friends because it is not free from risk; therefore, people have trusted their family members to give them help with internet banking use. For example, customer 19 said *"I check bank website which was in English so I could not get how to start online banking. I shared my computer screen through Skype with my brother who helped to create internet banking."* It was found that people know that creating login does not mean that customers have complete awareness regarding the functions of internet banking. Therefore, people take help from videos on official pages of banks, Facebook, and YouTube shared by banking experts to help people. For example, customer 39 said *"Internet banking is not about login, indeed, we should know how to do banking ourselves, which includes online payment, adding and delete payee, checking balance, and many other things. So, I believe that Facebook and YouTube were helpful for me to use online banking during Covid-19."* Another customer shared that they found it difficult to find out how to search utilities bills payment account of local companies, so they contacted a bank team member through Facebook who helped with this. For example, customer 40 stated *"I am really happy for rise of social media platforms as we can talk with bank teams 24/7, like I did, and they helped me to pay my utility bills."*

Many old people are far away from technology use but they use social media platforms, which increases their level of awareness about common social practices for using technology. For example, customer 23 told *"I believe that YouTube and WhatsApp friend group help me a lot to successfully learn about internet banking during Covid-19."* Many people are already uncertain and afraid due to impact of Covid-19 on their personal and professional lives; scammers have created trap stories to take advantage of this situation and grab money from less educated people. Some people who faced this situation shared their stories with their banks, then banks launched a campaign through social media to protect their customers and community. For example, bank manager 13 highlighted during a focus group interview that *"we launched a successful campaign through social media to protect our customers from banking fraud as scammers are more active and playing with less educated people during Covid-19 pandemic."* Sometimes people are not happy with the services of internet providers and internet banking, but they do not know to whom they should complain, especially when waiting time to talk with technology experts increased due to Covid-19. For example, customer 17 told *"sometimes I don't know whether the problem is with the internet or banking, which is a main issue for me."*

8. Main theme 2: social proof

8.1. Code 1: social wisdom

Keywords: friends, experts, crowd, sharing, evidence, likes, shares, followers, word of mouth, pressure, public sentiment.

Social proof is about social influence on technology adoption which was increased due to high use of social media platforms during Covid-19 pandemic. The use of social media platforms has increased shared information and engagement among friends to friends and experts to public, therefore, people are copying each other with the aim of avoiding an uncertain situation. Although some people believed that in- person banking was easy for them before Covid-19, the disease completely changed the scenario and now they move toward internet banking. The use of social media increased as people were limited to their homes and they took help from others through social media. For example, customer 17 said *"I was using traditional banking which is full of risk during Covid-19; so, I asked my friends and they shared useful material through social media which motivates me to start internet banking."* Some managers shared that social media increased information sharing through videos and posts which can get comments, likes, following, and sharing that can ultimately increase social validation and wisdom about internet banking. A bank manager 15 told during focus group interview that *"I saw a video from a satisfied customer about the internet banking benefits during Covid-19 and believe me it is viral on social media and many people really shared and liked it."*

Some managers believe that social media facilitated education about technology use, therefore, the number of people using internet banking increased recently. Bank manager 9 said during a focus group interview that *"It is very easy for us to create very helpful video and sharing link with our clients; that's why our banking customers have increased now. The increasing number of internet banking users also increased our employees' safety during Covid-19."* Although the rise of social media increased awareness about how to use internet banking, it also created pressure on bankers to offer error-free services; however, not all banks can meet customers' expectations, especially when their infrastructure is more supportive for traditional banking before Covid-19. The increase of Covid-19 and decrease in people's savings also increased pressure on banks to lay off staff as well as reduce the number of working hours for a safe environment. Negative reviews about services are now more frequent, which can demotivate people from becoming a user of internet banking. For example, customer 23 stated that *"my banking account got blocked because I tried to login with the wrong password and I started calling on weekend, but employees directed me to call for help from one person to another which really frustrated me, that's why I shared on social media."*

8.2. Code 2: promptness

Keywords: complaints, word of mouth, solutions, help, fast services, pressure, service quality.

The use of social practices through digitalization has increased promptness as customers are quick to share their complaints, positive and negative reviews, and recommendations through social media platforms. Some customers believe that use of social media is best thing because it helps banking customers by offering quick solutions to problems. For example, customer 2 highlighted *"I was facing issue to transfer money for my business activities through online banking account, but*

my bank team on Facebook really helped me within no time." It can be argued that the use of social practices through social media has increased service failure recovery for internet banking. People have shared that online banking has increased promptness for services especially during Covid-19 outbreak when they are facing financial hardship and stress. For example, customer 5 stated *"I lost my job during Covid-19, then my son advised me to open online banking account. My son quickly sent money from abroad for home expenses."* On the other hand, bankers also believe that the use of social media has increased pressure to give our excellent as customers immediately share experiences with others, which can negatively influence future customers. Bank manager 5 said during a focus group interview *"really digitalization has increased pressure to quickly provide solution to requests and complaints. We saw that people preferred to share their positive/ negative views on social media which de-mands immediate solution."*

9. Main theme 3: uncertainty

9.1. Code 1: vulnerability

Keywords: infection, safe, ATM, carrying cash, expert's communication, old people, patients.

Vulnerability means a risky situation that can create either physical or psychological threat during routine social practices. For example, visiting an ATM as well as carrying and exchanging cash can enhance chances to get Covid-19. The traditional bank has become a physical threat for customers. The Covid-19 pandemic forced people to avoid social contact with anyone; therefore, people started to use internet banking to avoid an uncertain situation. For example, customer 7 highlighted *"we have two options either we have to use online banking for staying at home or go to branch and get infected, so what should we do."* It was also found that bank managers shared that ATM, debit and credit card options, and cash exchange are no longer safe for both bankers and customers; therefore, they started to share health experts' messages on social media which support avoidance of social contact and the use of internet banking. Bank manager 5 said during a focus group interview *"I believe using ATM, exchange debit and credit card with cashier, and carrying currency can enhance risk for getting infection, so we share experts' communication that* supports *use of internet banking."* Some customers shared that they are among those who are the most vulnerable popu-lation, therefore, they have highest death rate. Although internet banking is best for them, they cannot quickly adopt it due to their lower level of education, skill, and confidence. For example, customer 4 shared *"elderly customers, who are among the most vulnerable to COVID-19, are the least likely to increase their use of online banking as they have low skills and confidence in it."* Similarly, customer 11 told *"I am heart patient and diabetic so I cannot go for in-person banking, therefore, I started to learn online banking from my sons and daughters who are educated."*

9.2. Code 2: severity

Keywords: avoid, public gathering, social circle, videos, database, awareness, education.

Severity means state of being very bad. For example, shopping outside for groceries and paying by cash or credit card are common social practices but they are not safely workable during Covid-19. People, as a social responsibility, shared pictures of those who could not understand the severity of Covid-19 and standing in front of banks. The purpose of sharing evidence through social media is to warn their close social circle so that they can avoid public gatherings and start to use internet banking. For example, customer 8 shared *"I saw on social media the pictures of people who are in long lines for banking, then I shared those pictures with my family and friends and suggested to use online banking which is secure and safe."* The social circle also helped each other by sending videos which can help them to use internet banking and avoid a risky situation. For example, customer 18 shared *"I am a single mom and*

have four kids so I cannot take risk of carrying cash and cards. I am thankful to my friend who sent YouTube videos which helped me to use internet banking." It was also found that banks also participated by finding account holders who usually visit the branches of banks, which is not safe for their employees and community. Bank manager 5 said during a focus group interview *"we used database and found 33 percent of our account holders are elderly and prefer to visit our bank, so we started social media campaign for giving them education for internet banking.*

9.3. Code 3: efficacy

Keywords: past experience, age, education, language, ability, desire result, learning, enjoying, family members, trust, competition, awareness.

Efficacy means all those sources which are helpful to increase the abilities of people with the purpose of adopting internet banking. The interviews revealed that people took help from their family members so that they can learn internet banking, especially during the critical situation when visiting bank branches was not risk free. It is important to note that people preferred to take help from their family members because they trust them, especially in the matter of sharing personal and financial information. For example, customer 24 highlighted *"It took 10 days to learn internet banking from my son and I have seen many YouTube videos to use internet banking during Covid-19, but now I am real enjoying doing banking from home."* Family members, such as sons and wife, played an important role in educating others about how to use internet banking. It can be argued that these family members have increased abilities, skills, and confidence to use internet banking. For example, customer 27 shared *"I always ask my wife because I don't know how to use website to do banking."* Similarly, customer 31 shared *"during Covid-19 I was always asking my son to do online banking for me, but gradually I am learning from him."* The bank managers also shared that they conducted awareness creation competition on social media so that they can enhance motivation and intention to use internet banking. For example, bank manager 5 said during focus group interview *"we also offered awareness creation competition through YouTube and other social media channels to increase customer awareness and knowledge during pandemic."*

10. Discussion

The importance and benefit of social media technology are acknowledged as it is interactive, collaborative, and integrated in nature; therefore, customers are more engaged and informed compared to the past (Agnihotri et al., 2017; Felix et al., 2017; Trainor et al., 2014). This study provides unique understanding regarding how individual and collective meanings extracted from information shared through social media shifted people's behavior toward a cashless society

during Covid-19 pandemic. For example, many people of developing countries have concerns regarding the safety and security of personal and financial information as there is a high number of cybercrime attacks and scams. But the Covid-19 outbreak and increased death rate led to people staying at home and completing all their routine financial transactions through internet banking. Going outside and physical contact with objects and humans increased chances of illness; therefore, people had no choice except to learn and start internet banking. On the other hand, bankers also took some initiatives to motivate people to use internet banking, such as reduced their opening hours so that a lower number of people can visit and sharing messages through celebrities and other well-known people to stay at home and use internet banking for safe work environment and for the welfare of the local community. The information shared through social media was helpful to maintain social distancing practices by staying at home and to use digitalization for completing routine social practices.

Previous studies have stated that high vulnerability in the security of an internet banking system can negatively influence customer behavior (Grabner-Krauter and Faullant, 2008¨ ; Kesharwani and Singh-Bisht,
2012; Liao et al., 2016), but this study provides understanding that vulnerability is about vulnerable people who were compelled to use internet banking during Covid-19 pandemic. There are a high number of old people who are patients who usually prefer to visit a bank for routine transactions as they do not have enough ability to use internet banking; therefore, there are more chances that these people can get infection and transmit this virus to others. Social media has developed social wisdom such as stay at home and start online banking from home otherwise hospitals will not have enough resources to deal with a high number of patients. Results reveal that bankers have launched an educational campaign through social media so that they can educate vulnerable people through their direct and indirect social network. For example, bankers have shared the messages of health professionals to stay at home and avoid social contact as well as touching any object that could be a source of Covid-19 infection.

There is shared information through social media to avoid ATMs, debit and credit card exchange with cashiers, and cash exchange as these are no longer safe options for both bankers and customers. These mes-sages increase people's intention to use internet banking as it is a matter of life and death if they use traditional banking during Covid-19 pandemic. Banks have also reduced the number of operational hours and staff so that they can reduce in-person visits as well as shift people's focus to the adoption of internet banking during Covid-19 pandemic. Previous literature is limited to perceived usefulness, ease of use, and perceived security for increasing acceptance of online banking (Chau-han et al., 2019; Sharma et al., 2020; Li´ebana-Cabanillas et al., 2018), it did not provide understanding of how a global pandemic can become a threat for practices of ATM, debit, and credit card exchange with cashier, and carrying cash. The Covid-19 pandemic has changed social practices from traditional banking to internet banking as there is lot of physical, social, and psychological threat involved in traditional banking practices. This study provides understanding regarding the meanings and competencies people developed via social media which created affordability to use internet banking. For example, people have created meanings, such as in-person banking, carrying cash, and using ATMs are not risk-free options during COVID-19 pandemic; as a result, people exchanged material through social sources using social media with the purpose to develop understanding of how to use internet banking. Due to information exchange through social media, people learned that good internet, smartphone, office computer, or material of family members and social network can be used, which means that social media helped to create affordability for internet banking adoption. Therefore, it can be concluded that social media has created meanings and competencies which ultimately enhanced the affordability of internet banking adoption during COVID-19 pandemic.

The other finding is material which means infrastructure that can support the use of internet banking. For example, people have shared videos through social media which provided guidance to increase awareness in developing countries where many people are not very aware of the benefits and how to use internet banking. These videos advise on which specific mobile, screen size, internet, and type of system is supportive to use internet banking. These videos and messages have provided guidelines on how to create login for internet banking as well as how to enjoy the various functions of the internet banking system. Bank managers shared that they tried to develop apps in both Urdu and English so that those who have little education can easily understand the functions of internet banking. It was also found that elderly people do not have enough skills, knowledge, and confidence in internet banking; therefore, both their family network as well as banks launched social media campaigns with the purpose to reduce the number of visits to banks and maintain employee and customer safety during Covid-19 pandemic. The social media teams of banks through Facebook also helped people to increase their knowledge as many customers contacted them regarding how to pay utility bills through the internet banking system.

11. Contribution

First, the extensively used TAM provided understanding about customer perception and usefulness of internet banking system (Alsajjan and Dennis, 2010; Chauhan et al., 2019; Marakarkandy et al., 2017; Mohammadi, 2015). However, the TAM did not aid understanding of how uncertain situations can play a role in the adoption of the social practices of internet banking through social interactions and social wisdom via social media platforms. Second, the studies on original TAMs and extension of TAMs (e.g. Chauhan et al., 2019; Munoz-Leiva et al., 2017; Kumar et al., 2011; Lai, 2017) did not consider the external environment (i.e. fear appeal and health risks of COVID-19) as a pushing factor of internet banking adoption. Third, although there are many theories, such as theory of reasoned action and theory of planned behavior (Asongu et al., 2018; Alsajjan and Dennis, 2010), social cognitive theory (Boateng et al., 2016), perceived risk theory (Roy et al., 2017), and models such as Unified theory of acceptance and use of technology model (UTAUT) (Choudrie et al., 2018; Rahi et al., 2019), UTAUT2, and information system success models (Baabdullah et al., 2019; Tarhini et al., 2016) for understanding the factors that can influence the adoption of internet banking, most of the existing literature does not explore the role of social media which can increase awareness, motivation, and competencies for internet banking adoption in an uncertain and fearful environment. Therefore, this study has provided the socially practiced affordance of technology (SPAOT) model that aids understanding regarding the meanings created about uncertainty through the social interactions of social actors using social media platforms, which can enhance the adoption of internet banking. For example, the COVID-19 pandemic has changed social practices from traditional banking to internet banking, especially in Pakistan, as there are a lot of physical (i.e. fear of illness as many people are not following social distancing practices), social, and psychological threats (low hygiene during ATM use, fear and stress about visiting bank branches) involved in traditional banking practices. The SPAOT model highlights that shared material through social media increased people's awareness, motivation, and competencies to use internet banking in a country where there are issues of lower literacy, readability, electricity, and internet accessibility.

The SPAOT model highlights that social shared information and social interactions have increased people's understanding and efficacy to adopt and use internet banking. Social media played a significant role with respect to understanding the nature of uncertainty during COVID- 19 pandemic that resulted in changes in customers' behavior from traditional banking to internet banking. Although previous studies have provided understanding about the adoption factors of online banking (Baptista and Oliveira, 2015; Farah et al., 2018; Oliveira et al., 2016; Shareef et al., 2018), these studies did not provide understanding on how social media can enhance awareness about the severity of the pandemic and people's vulnerability, which can increase the adoption and use of internet banking. The existing studies are limited to perceived severity of loss and severity assessment of internet banking system failure (Chen et al., 2011; Tooranloo and Ayatollah, 2017), but this SPAOT model provides understanding that social media increased shared information which changed customers' behavior toward

digitalization for financial services. For example, results reveal that standing in queues during visits to bank, touching ATM machines and entrance doors, and collecting cash from a cashier are some of the factors which can trigger severity of the global pandemic. Awareness of the severity of COVID-19 pandemic developed through social interactions and information exchange on social media. Consequently, people have selected options, such as the adoption of internet banking, which can reduce the chances of an unpleasant situation.

The first theoretical contribution of this study is to merge the SPT and affordance of technology theory in the context of internet banking adoption. The second theoretical contribution is that both SPT and affordance of technology theory are used in the context of global uncertainty and the role of social media to facilitate social wisdom and promptness for internet banking adoption. The shared information developed understanding that the use of internet banking from home is the safest practice otherwise there are more chances to get Covid-19 if people continue with traditional banking practices. The third theoretical contribution is to provide a structured form of information sharing factors (i.e. vulnerability, severity, interaction, and connectivity) that developed efficacy and facilitated the adoption process (i.e. material, meanings, competencies, and promptness). For example, some people shared pictures to their close social network through social media as social proof of people who are in long lines for banking where they are at risk of becoming infected, and advised their social network to stay at home and use internet banking only. The fourth contribution is through opting for a social constructionist epistemological position and relativist ontological position different realties of social practices of internet banking adoption have been identified in this study. For example, vulnerability, severity, interaction, and efficacy are these subjective realities which facilitated the internet banking adoption process (See Fig. 5).

On the practice side, both social practice and affordance of technology theories offer understanding to marketers regarding how consumers' experiences during uncertainty can lead toward internet banking adoption. There are lessons for marketers on how social media interactions are helpful to understand who the most vulnerable people are, what are the uncertain conditions during global crises, and how a less educated and low information group can develop competencies which can help them to adopt internet banking during any future global crises. The results also help to offer rich understanding to marketers about the reactions of customers toward various social wisdoms, especially in the context of technology which requires personal and financial information (See Fig. 5). For example, it was found that many people preferred to trust brother, son, and wife for information and learning about internet banking.

The increasing use of internet banking is very beneficial in building responsible societies and addressing inequalities among people. For example, a negative side to developing countries is that their political leaders and people are sometimes corrupt and involved in corruption as well as money laundering, such as setting aside cash through unfair means and investing in foreign properties and banks. Therefore, the adoption of internet banking in developing countries can make people more accountable and responsible for unfair actions; the adoption of internet banking is needed as a social practice. The findings also revealed that a lack of digital information protection initiatives, lack of digital literacy, low level of equal accessibility to digital infrastructure across the country, and low level of awareness about the benefits of internet banking are common challenges which can prevent an increase in the number of users of internet banking in developing countries. Therefore, it is the responsibility of leaders to take those steps which can increase people's awareness, trust, access, and skills for the adoption of internet banking.

12. Limitations and future directions

This study has used multiple qualitative data collection methods and sources with the purpose of getting a rich understanding about a specific context (Aslam et al., 2018): the social practice of internet banking adoption during uncertain and fearful environment of Covid-19 pandemic. The generalizability of social practices of internet banking adoption can be extended if future researchers test the model by collecting data from both developed and developing countries. Future studies can explore which specific social media are extensively used by customers in exchanging information and influence customer behavior toward internet banking adoption. Future studies can also test how fear appeals through the health sector influence the customer behavior toward technology adoption for various sectors such as retail banking, supermarkets, tourism, and fashion industries.
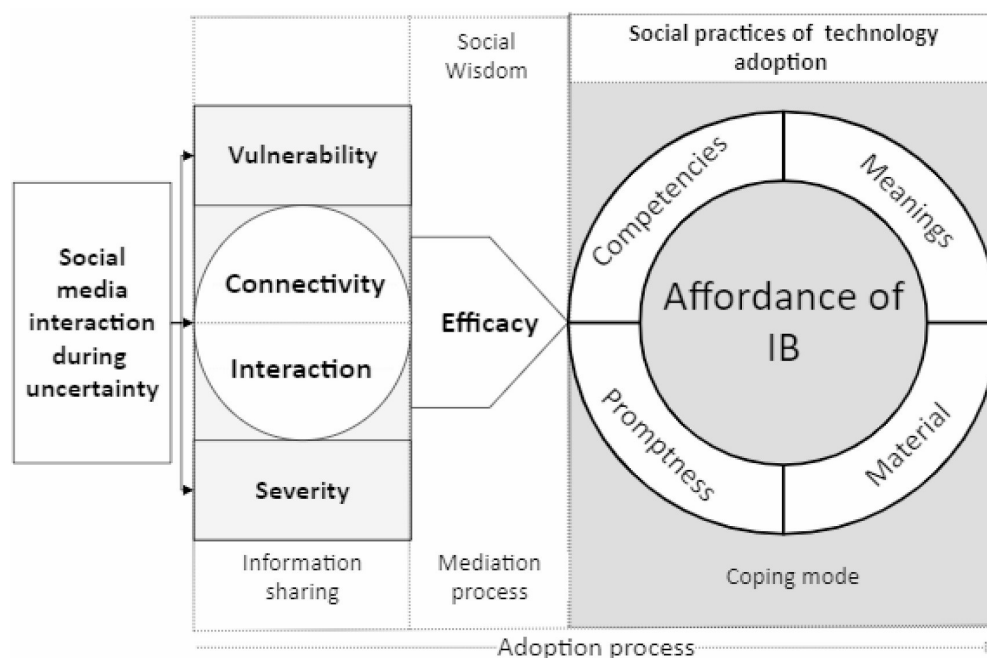

Fig. 5. Socially practiced affordance of technology (SPAOT) model. (Source: 'author')

Appendix 1. Existing studies on internet banking/technology adoption in developing countries

Author and year	Research objectives	Theory/framework	Data collection (Sample)	Data analysis	Destination (developing country)
Abbasi et al. (2017)	Investigating important factors that can influence the adoption of internet banking	TAM	250 banking customers	Quantitative (Multiple regression analysis)	Pakistan
Akhlaq and Ahmed (2013)	Finding the type of motivation that can enhance trust in internet banking in a developing country	Motivation model, self-determination theory, and TAM model	109 banking customers	Quantitative (Structural equation modelling)	Pakistan
Rahi et al. (2019)	To identify internet banking issues by focusing on technology perspective	Unified theory of acceptance and use of technology	398 customers of commercial bank	Quantitative (Structural equation modelling)	Pakistan
Rahi et al. (2020)	Finding the motivating factors that can develop consistency in the use of internet banking	Task technology fit theory and technology continuance theory	360 internet banking users	Quantitative (Structural equation modelling)	Pakistan
Anwar et al. (2020)	Knowing about the important factors of technology acceptance and adoption	Theory of economic utility	488 customers	Quantitative (Partial least square and structural equation modelling)	Pakistan and India
Khan et al. (2018)	o find out the causes of low adoption of online technologies (i.e. online stock trading)	Perceived risk theory	172 electronic brokerage users	Quantitative (structural equation modelling)	Pakistan
Alalwan et al. (2016)	Promoting the use of telebanking as self-service technology	TAM	323 respondents	Quantitative (structural equation modelling)	Jordan
Alalwan et al. (2018)	Knowing about the important factors that can influence customer intention and internet banking adoption	Unified theory of acceptance and use of technology (UTAUT2)	500 Jordan banking customers	Quantitative (structural equation modelling)	Jordan
Amin (2016)	Investigating how service quality of internet banking can influence e-customer loyalty and satisfaction		520 banking customers	Quantitative (structural equation modelling)	Malaysia
Yuen et al. (2015)	Knowledge culture differences between USA and Malaysia and their impact on internet banking adoption	Unified theory of acceptance and use of technology model (UTAUT)	666 internet banking users	Quantitative (structural equation modelling)	Malaysia
Shareef et al. (2018)	Focus on investigating consumer adoption of mobile banking services	Theory of planned behavior and TAM		Quantitative (path analysis and comparison with GAM model)	Bangladesh
Chaouali et al. (2017)	Finding customers' attitude toward learning, failure, and success of internet banking	Theory of trying	557 banking customers	Quantitative (structural equation modelling)	Tunisia
Omoregie et al. (2019)	Knowing the antecedents of retail internet banking customers' loyalty intentions		565 banking customers	Quantitative (structural equation modelling)	Ghana
Chauhan et al. (2019)	Investigating customers' intention to adopt and use internet banking	TAM	487 consumers	Quantitative (structural equation modelling)	India
Gupta, & Arora (2017)	Knowing the reasons for and against mobile banking	Behavioral reasoning theory	379 consumers	Quantitative (structural equation modelling)	India
Hanafizadeh et al. (2014)	Systematic review of internet banking (offered comparison of developed and developing countries)	TAM, TAM2, UTAUT, decomposed theory of planned behavior	165 research studies	Systematic literature review (Comparative method)	–
Marakarkandy et al. (2017)	Factors enabling internet banking adoption	TAM	300 banking customers	Quantitative (structural equation modelling)	India
Patel and Patel (2018)	TAM and its effect to produce social influence and customer behavioral intention to adopt internet banking	TAM	284 banking customers	Quantitative (structural equation modelling)	India
Roy et al. (2017)	Knowing about internet banking acceptance	TAM and perceived risk theory	270 respondents	Quantitative (structural equation modelling)	India
Shareef et al. (2018)	Investigating the antecedents of word of mouth that can trigger mobile banking adoption	Elaboration likelihood model theory	1153 respondents	Quantitative (structural equation modelling)	India
Sharma et al. (2020)	A conceptual framework on internet banking adoption in Fiji	UTAUT	530 respondents	Quantitative (structural equation modelling)	Fiji
Makanyeza (2017)	Using Augmented technology acceptance model for enabling internet banking adoption	Augmented technology acceptance model	300 respondents	Quantitative (structural equation modelling)	Zimbabwe

Appendix 2. Semi-structured interview questions (for internet banking users)

Q1: Do you think that your use of social media platforms increased for information exchange during Covid-19?

Q2: Which information was commonly shared and received through social media platforms and how did it influence your routine practices?

Q3: Do you think that shared information on social media changed your behavior toward technology use?

Q4: Which videos, pictures, or posts through social media did you commonly see and how did they influence your routine banking activities?

Q5: Do you think your use of internet banking increased as compared to before the start of this pandemic, if yes/no, then why?

Q6: What are common challenges which forced you to use or learn about internet banking services during Covid-19?

Q7: What you experienced which discouraged you to use internet banking?

Q8: What are your expectations with respect to improve your behavior toward internet banking?

Appendix 3. Focus group interview questions (for bank executives)

Q1: What actions you have done with respect to safe your customers and employees during Covid-19?

Q2: How you use health related precautions with the purpose to aware and educate your customers?

Q3: What strategies you have made for motivating your customers to use internet banking services?

Q4: What challenges you have seen and reported by customers for internet banking services?

Q5: How social media platforms helped to engage and educate your customers for the adoption of internet banking?

Q6: How you identify vulnerable group of people and what actions you have taken to protect them and others during Covid-19 pandemic?

Appendix 4. Internet banking user's demographic information

No.	Gender	Age (year)	Income (Pakistani rupee)	Social media active account	Profession	Education
1	M	26	Below fifteen thousand	4	Unemployed	BA
2	M	30	Below fifteen thousand	4	Student	MA
3	M	38	Below hundred thousand	3	Business owner	MCS
4	F	46	Below fifty thousand	2	Business owner	MBA
5	M	49	Below fifty thousand	3	Professional male	ACCA
6	M	55	Below thirty thousand	1	Office worker	BA
7	M	42	Below thirty thousand	2	Office worker	BCS
8	M	38	Below hundred thousand	2	Business owner	MBA and ACCA
9	F	35	Below fifty thousand	2	Entrepreneur	MA HRM
10	F	45	Below fifteen thousand	3	Mom	Intermediate
11	M	41	Below fifty thousand	2	Marketing consultant	MBA
12	M	58	Below fifteen thousand	2	Unemployed	BA
13	M	34	Below fifteen thousand	3	Student	MSCS
14	F	45	Below hundred thousand	2	Lecturer	MSBA
15	F	43	Below fifteen thousand	3	Housewife	MA
16	M	45	Below fifty thousand	2	Business owner	MA
17	M	32	Below fifteen thousand	2	Student	LLB
18	M	46	Below fifty thousand	3	Marketing consultant	MBA
19	M	36	Below fifteen thousand	4	Unemployed	MSIT
20	F	52	Below fifty thousand	2	Business owner	MA HRM
21	F	39	Below fifteen thousand	3	Mom	MSc in leadership
22	M	53	Below fifty thousand	4	Office worker	Intermediate
23	M	40	Below fifteen thousand	2	Unemployed	Master's degree
24	F	46	Below fifteen thousand	3	Mom	Intermediate
25	M	50	Below thirty thousand	3	Office worker	BA
26	M	42	Below fifty thousand	2	Marketing professional	MBA
27	M	45	Below thirty thousand	3	Office worker	MSc in leadership
28	F	56	Above hundred thousand	4	Associate professor	PhD
29	F	44	Below thirty thousand	2	Housewife	MA
30	M	36	Below fifty thousand	2	Professional worker	MSIT
31	M	49	Below hundred thousand	2	IT professional	MCS
32	M	59	Above hundred thousand	3	Associate professor	DBA
33	M	38	Below fifteen thousand	2	Unemployed	BA
34	M	42	Below fifteen thousand	1	Unemployed	BA
35	M	36	Below fifteen thousand	4	Unemployed	Intermediate
36	F	35	Below fifty thousand	3	Mom	Intermediate
37	F	40	Below fifty thousand	2	Housewife	Intermediate
38	M	36	Below fifteen thousand	1	Unemployed	Intermediate
39	F	37	Below fifteen thousand	1	Housewife	Intermediate
40	F	45	Below fifteen thousand	2	Unemployed	Intermediate
41	F	41	Below thirty thousand	3	Mom	Intermediate
42	M	50	Below hundred thousand	2	Marketing consultant	MBA
43	F	30	Below thirty thousand	3	Mom	BS IT
44	F	51	Below thirty thousand	3	Office worker	BA
45	M	45	Below fifteen thousand	2	Unemployed	Intermediate
46	M	29	Below thirty thousand	3	Student	MSCS

Appendix 5. Bankers executives' demographic information

No.	Gender	Social media active account	Designation	Education
				MBA
1	F	2	Head of marketing	
2	F	3	Head of IT	MCS
3	M	3	General manager Accounts	CA
4	F	2	Head of Customer services	MBA
5	M	1	Manager of front-line employees	MBA
6	F	2	Manager of customer relationship	MA
7	M	3	Manager of IT	MS IT
8	M	3	Area vice president	MSBA

(continued)

No.	Gender	Social media active account	Designation	Education
9	M	2	Operational Manger	MBA
10	M	3	Manager of IT	MBA
11	M	2	Manager of IT	MBA
12	M	4	Head of Customer services	MBA, CA
13	F	2	Manager of Customer services	MBA

14	M	3		Head of marketing	MA
15	M	2		Manager of Marketing	MBA
16	F	3		General manager Accounts	CA
17	F	3		Head of Customer services	MBA
18	F	3		Manager of Marketing	MBA
19	M	3		Manager of IT	MS IT
20	M	3		Area vice president	MSBA

References

Abbasi, S., Kamran, S., Akhtar, C., 2017. Factors affecting customers' adoption of internet banking in Pakistan. Pakistan Administrat. Rev. 1 (2), 115–129.

Agnihotri, R., Trainor, K.J., Itani, O.S., Rodriguez, M., 2017. Examining the role of sales- based CRM technology and social media use on post-sale service behaviors in India. J. Bus. Res. 81, 144–154.

Ahmed, K., 2020. Coronavirus accelerates Pakistan's shift away from cash to digital payment, bankers say. Available at: https://www.arabnews.pk/node/1735561 /pakistan. (Accessed 16 September 2020).

Akhlaq, A., Ahmed, E., 2013. The effect of motivation on trust in the acceptance of internet banking in a low income country. Int. J. Bank Market. 31 (2), 115–125.

Akpan, I.J., Udoh, E.A.P., Adebisi, B., 2020. Small business awareness and adoption of state-of-the-art technologies in emerging and developing markets, and lessons from the COVID-19 pandemic. J. Small Bus. Enterpren. 1–18.

Alalwan, A.A., Dwivedi, Y.K., Rana, N.P., Algharabat, R., 2018. Examining factors influencing Jordanian customers' intentions and adoption of internet banking: extending UTAUT2 with risk. J. Retailing Consum. Serv. 40, 125–138.

Alalwan, A.A., Dwivedi, Y.K., Rana, N.P., Simintiras, A.C., 2016. Jordanian consumers' adoption of telebanking: influence of perceived usefulness, trust and self-efficacy. Int. J. Bank Market. 34 (5), 690–709.

Alsajjan, B., Dennis, C., 2010. Internet banking acceptance model: cross-market examination. J. Bus. Res. 63 (9–10), 957–963.

Amin, M., 2016. Internet banking service quality and its implication on e-customer satisfaction and e-customer loyalty. Int. J. Bank Market. 34 (3), 280–306.

Anney, V.N., 2014. Ensuring the quality of the findings of qualitative research: looking at trustworthiness criteria. Available at: http://196.44.162.10:8080/xmlui/h andle/123456789/256.

Anwar, A., Thongpapanl, N., Ashraf, A.R., 2020. Strategic imperatives of mobile commerce in developing countries: the influence of consumer innovativeness, ubiquity, perceived value, risk, and cost on usage. J. Strat. Market. 1–21.

Apuke, O.D., Omar, B., 2020. Fake news and COVID-19: modelling the predictors of fake news sharing among social media users. Telematics Inf. 101475.

Aslam, U., Muqadas, F., Imran, M.K., Saboor, A., 2018. Emerging organizational parameters and their roles in implementation of organizational change. J. Organ. Change Manag. 31 (5), 1084–1104.

Asongu, S., Nwachukwu, J.C., 2018. Comparative human development thresholds for absolute and relative pro-poor mobile banking in developing countries. Inf. Technol. People 31 (1), 63–83.

Azemi, Y., Ozuem, W., Howell, K.E., Lancaster, G., 2019. An exploration into the practice of online service failure and recovery strategies in the Balkans. J. Bus. Res. 94, 420–431.

Baabdullah, A.M., Alalwan, A.A., Rana, N.P., Kizgin, H., Patil, P., 2019. Consumer use of mobile banking (M-Banking) in Saudi Arabia: towards an integrated model. Int. J. Inf. Manag. 44, 38–52.

Baptista, G., Oliveira, T., 2015. Understanding mobile banking: the unified theory of acceptance and use of technology combined with cultural moderators. Comput. Hum. Behav. 50, 418–430.

Bitsch, V., 2005. Qualitative research: a grounded theory example and evaluation criteria. J. Agribus. 23 (345–2016-15096), 75–91.

Boateng, H., Adam, D.R., Okoe, A.F., Anning-Dorson, T., 2016. Assessing the determinants of internet banking adoption intentions: A social cognitive theory perspective. Comput. Human Behav. 65, 468–478.

Boghossian, P., 2006. Behaviorism, constructivism, and Socratic pedagogy. Educ. Philos. Theor. 38 (6), 713–722.

Chang, Y.T., Yu, H., Lu, H.P., 2015. Persuasive messages, popularity cohesion, and message diffusion in social media marketing. J. Bus. Res. 68 (4), 777–782.

Chaouali, W., Souiden, N., Ladhari, R., 2017. Explaining adoption of mobile banking with the theory of trying, general self-confidence, and cynicism. J. Retailing Consum. Serv. 35, 57–67.

Chauhan, V., Yadav, R., Choudhary, V., 2019. Analyzing the impact of consumer innovativeness and perceived risk in internet banking adoption: a study of Indian consumers. Int. J. Bank Market. 37 (1), 323–339.

Chen, S.H., Liao, C.C., 2011. Are foreign banks more profitable than domestic banks? Home-and host-country effects of banking market structure, governance, and supervision. J. Bank. Finance 35 (4), 819–839.

Choudrie, J., Junior, C.O., McKenna, B., Richter, S., 2018. Understanding and conceptualising the adoption, use and diffusion of mobile banking in older adults: a research agenda and conceptual framework. J. Bus. Res. 88, 449–465.

Cope, D.G., 2014. Methods and meanings: credibility and trustworthiness of qualitative research. Oncol. Nurs. Forum 41 (1).

Diefenbach, T., 2009. Are case studies more than sophisticated storytelling?: methodological problems of qualitative empirical research mainly based on semi- structured interviews. Qual. Quantity 43, 875–894.

Durkin, M., Mulholland, G., McCartan, A., 2015. A socio-technical perspective on social media adoption: a case from retail banking. Int. J. Bank Market. 33 (7), 944–962.

Farah, M.F., Hasni, M.J.S., Abbas, A.K., 2018. Mobile-banking adoption: empirical evidence from the banking sector in Pakistan. Int. J. Bank Market. 36 (7), 1386–1413.

Felix, R., Rauschnabel, P.A., Hinsch, C., 2017. Elements of strategic social media marketing: a holistic framework. J. Bus. Res. 70, 118–126.

Fontana, A., Frey, J.H., 2000. The interview: from structured questions to negotiated text. Handbook Qual. Res. 2 (6), 645–672.

Gibbs, G., 1988. Learning by Doing: A Guide to Teaching and Learning Methods. Further Education Unit. Oxford Polytechnic, Oxford.

Gibson, J.J., 1979. The Ecological Approach to Visual Perception. Houghton Mifflin, Boston.

Gioia, D.A., Corley, K.G., Hamilton, A.L., 2012. Organizational research. Organ. Res. Methods 16 (1), 15–31.

Goertz, G., Mahoney, J., 2012. Concepts and measurement: ontology and epistemology. Soc. Sci. Inf. 51 (2), 205–216.

Grabner-Krauter, S., Faullant, R., 2008. Consumer acceptance of internet banking: the¨ influence of internet trust. Int. J. Bank Market. 26 (7), 483–504.

Griffith, A.M., 2018. Social construction and grounding. Philos. Phenomenol. Res. 97 (2), 393–409.

Guba, E.G., 1981. Criteria for assessing the trustworthiness of naturalistic inquiries. Ectj 29 (2), 75.

Guba, E.G., Lincoln, Y.S., 1994. Competing paradigms in qualitative research. Handbook Qual. Res. 2 (163–194), 105.

Gupta, A., Arora, N., 2017. Consumer adoption of m-banking: a behavioral reasoning theory perspective. Int. J. Bank Market. 35 (4), 733–747.

Hadwin, A.F., Jarve¨ la, S., Miller, M., 2011. Self-regulated, co-regulated, and socially¨ shared regulation of learning. Handbook of self-regulation of learning and performance 30, 65–84.

Hanafizadeh, P., Keating, B.W., Khedmatgozar, H.R., 2014. A systematic review of Internet banking adoption. Telematics Inf. 31 (3), 492–510.

Hansen, J.M., Saridakis, G., Benson, V., 2018. Risk, trust, and the interaction of perceived ease of use and behavioral control in predicting consumers' use of social media for transactions. Comput. Hum. Behav. 80, 197–206.

Holloway, B.B., Beatty, S.E., 2003. Service failure in online retailing: a recovery opportunity. J. Serv. Res. 6 (1), 92–105.

Howell, K.E., 2012. An Introduction to the Philosophy of Methodology. Sage.

Howell, K.E., Annansingh, F., 2013. Knowledge generation and sharing in UK universities: a tale of two cultures? Int. J. Inf. Manag. 33 (1), 32–39.

Islam, A.N., Laato, S., Talukder, S., Sutinen, E., 2020a. Misinformation sharing and social media fatigue during COVID-19: an affordance and cognitive load perspective. Technol. Forecast. Soc. Change 159, 120201.

Islam, T., Pitafi, H., Wang, Y., Aryaa, V., Mubarik, S., Akhater, N., Xiaobei, L., 2020b. Panic buying in the COVID-19 pandemic: a multi-country examination. J. Retailing Consum. Serv. 102357.

Kesharwani, A., Singh Bisht, S., 2012. The impact of trust and perceived risk on internet banking adoption in India: an extension of technology acceptance model. Int. J. Bank Market. 30 (4), 303–322.

Khan, S.U., Liu, X., Khan, I.U., Liu, C., Hameed, Z., 2018. Measuring the effects of risk and cultural dimensions on the adoption of online stock trading: a developing country perspective. Int. J. Enterprise Inf. Syst. 14 (3), 106–127.

Kim, J., Giroux, M., Kim, J.E., Choi, Y.K., Gonzalez-Jimenez, H., Lee, J.C., et al., 2020. The moderating role of childhood socio-economic status on the impact of nudging on the perceived threat of coronavirus and stockpiling intention. J. Retailing Consum. Serv. https://doi.org/10.1016/j.jretconser.2020.102362.

Kumar, V.V., Bose, S.K., Raghavan, P.V., 2011. Extension of technology adoption model (TAM) intention to use internet banking: evidence from India. Int. J. Finance Pol. Anal. 3 (1).

Laato, S., Islam, A.N., Farooq, A., Dhir, A., 2020. Unusual purchasing behavior during the early stages of the COVID-19 pandemic: the stimulus-organism-response approach. J. Retailing Consum. Serv. 57, 102224.

Lai, P.C., 2017. Security as an extension to TAM model: consumers' intention to use a single platform E-Payment. Asia-Pacific J. Manag. Res. Innov. 13 (3–4), 110–119.

Liao, C., Huang, Y.J., Hsieh, T.H., 2016. Factors influencing internet banking adoption. SBP (Soc. Behav. Pers.)Int. J. 44 (9), 1443–1455.

Liebana-Cabanillas, F., Marinkovic, V., de Luna, I.R., Kalinic, Z., 2018. Predicting the´ determinants of mobile payment acceptance: a hybrid SEM-neural network approach. Technol. Forecast. Soc. Change 129, 117–130.

Lincoln, Y.S., Guba, E.G., 1982. Establishing dependability and confirmability in naturalistic inquiry through an audit. Available at: https://eric.ed.gov/? id=ED216019.

Madriz, E., 2000. Focus groups in feminist research. Handbook Qual. Res. 2, 835–850.

Makanyeza, C., 2017. Determinants of consumers' intention to adopt mobile banking services in Zimbabwe. Int. J. Bank Market. 35 (6), 997–1017.

Malefyt, T.W., 2015. Relationship advertising: how advertising can enhance social bonds. J. Bus. Res. 68 (12), 2494–2502.

Marakarkandy, B., Yajnik, N., Dasgupta, C., 2017. Enabling internet banking adoption: an empirical examination with an augmented technology acceptance model (TAM). J. Enterprise Inf. Manag. 30 (2), 263–294.

Marous, J. (2020) Big Banks Benefiting Most From COVID-19 Digital Shifts Avaialbe at: https://thefinancialbrand.com/95735/digital-online-banking-coronavirus/ (Accessed on November 2020).

Maxwell, J., 2013. Qualitative Research Design: an Interactive Approach, vol. 3. Sage, Thousand Oaks, CA.

Mitic, M., Kapoulas, A., 2012. Understanding the role of social media in bank marketing. Market. Intell. Plann. 30 (7), 668–686.

Mohammadi, H., 2015. A study of mobile banking loyalty in Iran. Comput. Hum. Behav. 44, 35–47.

Mos̗teanu, D., Roxana, N., Faccia, D., Cavaliere, L.P.L., Bhatia, S., 2020. Digital technologies' implementation within financial and banking system during socio distancing restrictions–back to the future. Int. J. Adv. Res. Eng. Technol. 11 (6).

Munoz-Leiva, F., Climent-Climent, S., Li´ebana-Cabanillas, F., 2017. Determinants of intention to use the mobile banking apps: an extension of the classic TAM model. Spanish J. Market ESIC 21 (1), 25–38.

Nicolini, D., 2012. Practice Theory, Work, and Organization: an Introduction. OUP, Oxford.

Oliveira, T., Thomas, M., Baptista, G., Campos, F., 2016. Mobile payment: understanding the determinants of customer adoption and intention to recommend the technology. Comput. Hum. Behav. 61, 404–414.

Omoregie, O.K., Addae, J.A., Coffie, S., Ampong, G.O.A., Ofori, K.S., 2019. Factors influencing consumer loyalty: evidence from the Ghanaian retail banking industry. Int. J. Bank Market. 37 (3), 798–820.

Patel, K.J., Patel, H.J., 2018. Adoption of internet banking services in Gujarat: an extension of TAM with perceived security and social influence. Int. J. Bank Market. 36 (1), 147–169.

Patten, E., Ozuem, W., Howell, K., 2020. Service quality in multichannel fashion retailing: an exploratory study. Inf. Technol. People 33 (4), 1327–1356.

Prentice, C., Chen, J., Stantic, B., 2020. Timed intervention in COVID-19 and panic buying. J. Retailing Consum. Serv. 57, 102203.

Quach, S., Thaichon, P., 2017. From connoisseur luxury to mass luxury: value co-creation

Rahi, S., Ghani, M.A., Ngah, A.H., 2019. Integration of unified theory of acceptance and use of technology in internet banking adoption setting: evidence from Pakistan. Technol. Soc. 58, 101120.

Rahi, S., Khan, M.M., Alghizzawi, M., 2020. Extension of technology continuance theory (TCT) with task technology fit (TTF) in the context of Internet banking user continuance intention. Int. J. Qual. Reliab. Manag. https://doi.org/10.1108/IJQRM- 03-2020-0074.

Ravitch, S.M., Carl, N.M., 2019. Qualitative Research: Bridging the Conceptual, Theoretical, and Methodological. SAGE Publications, Incorporated.

Reckwitz, A., 2002. Toward a theory of social practices: a development in culturalist theorizing. Eur. J. Soc. Theor 5 (2), 243–23.

Reuters, 2020. Coronavirus effect: UK supermarket visits jump by 79 million before lockdown. Available at: https://www.indiatoday.in/business/story/coronavirus-eff ect-uk-supermarket-visits-jump-by-79-million-before-lockdown-1661763-202 0-03-31. (Accessed 31 March 2020).

Ringberg, T., Odekerken-Schroder, G., Christensen, G.L., 2007. A cultural models¨ approach to service recovery. J. Market. 71 (3), 194–214.

Robson, C., 2007. Real World Research, vol. 2. Blackwell, Chichester.

Røpke, I., 2009. Theories of practice—new inspiration for ecological economic studies on consumption. Ecol. Econ. 68 (10), 2490–2497.

Roy, S.K., Balaji, M.S., Kesharwani, A., Sekhon, H., 2017. Predicting Internet banking adoption in India: a perceived risk perspective. J. Strat. Market. 25 (5–6), 418–438. Schatzki, T., 2001. Practice theory. In: Schatzki, T.R., Knorr Cetina, K., Von Savigny, E. (Eds.), The Practice Turn in Contemporary Theory. Routledge, New York.

Schatzki, T.R., 2011. Where the action is (on large social phenomena such as sociotechnical regimes). Sustainable Practices Research Group. Working Paper, 1, pp. 1–31.

Schon, D., 1983. The Reflective Practitioner: How Professionals Think in Action. Basic Books, New York.

Schwandt, T.A., Lincoln, Y.S., Guba, E.G., 2007. Judging interpretations: but is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. N. Dir. Eval. 114, 11–25.

Shaikh, A.A., Karjaluoto, H. (Eds.), 2018. Marketing and Mobile Financial Services: a Global Perspective on Digital Banking Consumer Behaviour. Routledge.

Shareef, M.A., Baabdullah, A., Dutta, S., Kumar, V., Dwivedi, Y.K., 2018. Consumer adoption of mobile banking services: an empirical examination of factors according to adoption stages. J. Retailing Consum. Serv. 43, 54–67.

Sharma, R., Singh, G., Sharma, S., 2020. Modelling internet banking adoption in Fiji: a developing country perspective. Int. J. Inf. Manag. 53, 102116.

Shove, Elizabeth, Pantzar, Mika, Watson, Matt, 2012. The Dynamics of Social Practice: Everyday Life and How it Changes. Sage, London.

Tarhini, A., El-Masri, M., Ali, M., Serrano, A., 2016. Extending the UTAUT model to understand the customers' acceptance and use of internet banking in Lebanon: a structural equation modeling approach. Inf. Technol. People 29 (4), 830–849.

Tooranloo, H.S., Ayatollah, A.S., 2017. Pathology the internet banking service quality using failure mode and effect analysis in interval-valued intuitionistic fuzzy environment. Int. J. Fuzzy Syst. 19 (1), 109–123.

Trainor, K.J., Andzulis, J.M., Rapp, A., Agnihotri, R., 2014. Social media technology usage and customer relationship performance: a capabilities-based examination of social CRM. J. Bus. Res. 67 (6), 1201–1208.

Tran, L.T.T., 2020. Managing the effectiveness of e-commerce platforms in a pandemic. J. Retailing Consum. Serv. 58, 102287.

Tulving, E., Thomson, D.M., 1973. Encoding specificity and retrieval processes in episodic memory. Psychol. Rev. 80 (5), 352.

Wen, Z., Huimin, G., Kavanaugh, R.R., 2005. The impacts of SARS on the consumer behaviour of Chinese domestic tourists. Curr. Issues Tourism 8 (1), 22–38.

Yuen, Y.Y., Yeow, P.H., Lim, N., 2015. Internet banking acceptance in the United States and Malaysia: a cross-cultural examination. Market. Intell. Plann. 33 (3), 292–308.

Zhuang, M., Cui, G., Peng, L., 2018. Manufactured opinions: the effect of manipulating online product reviews. J. Bus. Res. 87, 24–35.