

Impact of Interactivity on Bookkeeping Application Adoption Intention in the New Normal: A Consumption Values Perspective

Pooja Kumari, Indian Institute of Management Visakhapatnam*

ABSTRACT

The study aims to examine the effects of interactivity on users' adoption intention via perceived consumption values in the bookkeeping application context after the pandemic. The study also investigates the moderating effect of users' involvement on the association between interactivity and perceived values. Data were collected using online survey from 276 SMEs in India. The results indicated that application interactivity enhances users' perceived consumption values (functional, emotional, social, conditional, and epistemic) and in turn adoption intention. Moreover, users' involvement positively moderates that association between application interactivity and consumption values. The findings of the study suggest bookkeeping application service providers should emphasize enhancing users' adoption intention. The study enriches interactivity, consumption values, and users' behavioural intention literature.

KEYWORDS

Adoption Intention, Consumption Values, Interactivity, Involvement, Theory of Consumption Values

1. INTRODUCTION

Information technology advancement, Internet, mobile phone penetration, and COVID change the service delivery ecosystem (Shankar, 2021). Among emerging service delivery technologies, mobile phones evolved as strategic and effective tool for offering products and services (Shankar and Datta, 2019; Thompson et al., 2019; Shankar et al., 2020; Talwar et al., 2020). The advancement in the technology provided new opportunity to the organisation to deliver services using mobile phone known as mobile commerce (Shankar and Datta, 2019). Mobile commerce refers to the usage of communication and electronic technologies for the mobile phone based trading of items (goods and services) (Huang et al., 2015). Mobile commerce, in its early years, was primarily confined to the developed nations; however, due to the high rate of internet penetration in recent years, it has pervaded the developing nations as well (Agarwal and Wu, 2018; Shankar et al., 2020). According to an estimate by Forrester Research, mobile commerce will contribute to about 17% of total retail sales by 2022 (Forrester report, 2018). Interestingly, between 2012 and 2017, global mobile commerce

DOI: 10.4018/JECO.300301

*Corresponding Author

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

players, grew their gross sales at a staggering rate of 34% a year (McKinsey and Company, 2019). These statistics indicate the ongoing 'growth' phase of the mobile commerce industry around the world (Shankar and Rishi, 2020). Due to immense growth and unique characteristics such as ubiquity and localization, organisations shift their delivery platform from offline to mobile phone (Shankar et al., 2020a). Mobile commerce provides an economical and efficient way for delivering services using mobile application and reach to their target consumers (Huang et al., 2015; Pandey and Sohani, 2020). Mobile commerce is not only beneficial for the service providers but also for the consumers (Shankar and Datta, 2018). Service providers can deliver the services in cost-effective manner with greater reach whereas, consumers can avail services using mobile application anytime from anywhere (Shankar and Jain, 2021). Hence, financial services, hospitality services, retailing services, healthcare services are being delivered using mobile application (Shankar and Datta, 2019). Similarly, accounting services providers are now providing services using mobile phone application and several applications have been introduced to provide accounting services, especially bookkeeping services to the enterprises. Quickbooks, Wave, Bench, Bill.com, and Khatabook are major bookkeeping applications for small business owners. The management of accounting is a real challenge for the Small and Medium Enterprises (SME), and they needed a simple and handy digital solution to manage their accounts. Despite, several benefits offered by bookkeeping service providers, the adoption rate of bookkeeping apps are not as expected. Specially, in emerging market like India where SMEs and local shopkeepers are not tech-savvy and sceptic towards usage of technology for maintaining financial records (Shankar and Kumari, 2016; Yadav and Mahara, 2019). Due to financial transactions involved in the application usage, shopkeepers are concerned about privacy of the personal information shared over platforms and security of the transaction (Shankar et al., 2020). Hence, they try to avoid adopt and use bookkeeping application for maintaining the accounts. Moreover, some organisations do not use bookkeeping application due to complex interface and navigation (Huang et al., 2015). Ease of use is one of the crucial factor which motivate users to adopt technology (Islam et al., 2021). Hence, user friendly application interface may enhance the usability of the application and may lead to adoption. As interactivity of the mobile application plays important role in framing consumers' adoption and usage of the mobile application. Several studies investigated the effect of interactivity on consumers' adoption behaviour in different contexts (Lee et al., 2015; Bedi et al., 2017; Cano et al., 2017; Shankar et al., 2021). However, limited efforts have been made to examine how interactivity of application impact mobile commerce application from organisation perspective specifically, SMEs and shopkeepers' perspective. Hence, this study contributes to bookkeeping application adoption behaviour literature. Further, scant research apply theory of consumption values (TCV) in investigating technology adoption behaviour from SMEs' perspective.

Further, COVID-19 has transcended geographical boundaries with a global pandemic that has an exponentially rising number of confirmed cases and deaths (UNDP, 2020). Accordingly, users are sceptic about using offline channels for making for availing services. Hence, post-pandemic to attract users again to the offline service platform is one of the challenging tasks in front of organisations and they keen to know how to motivate users to switch to the online platforms. Moreover post-pandemic users try to avoid physical touch hence, it crucial to know what motivate users to adopt mobile bookkeeping application.

Further, consumers' perceived value play crucial role in consumer decision making process. Consumers tend to adopt and use the technology if they perceived it valuable. Hence, the TCV has been used for understanding customer behaviour of adopting bookkeeping application. This theory posits that customers choose across various products or services based on the values provided by the products or the services (Sheth et al., 1991). Consumer's adoption intention towards technology is significantly affected by expected values (e.g., functional value, emotional value etc.). The interactivity of the mobile commerce applications provides several perceived consumption values such as, function value, emotional value, social value, epistemic value, conditional value to the users

(Cano et al., 2017). Further, if users customers evaluate consumption values around mobile application and accordingly develop their decision to adopt the services. If customers perceive that they will get better consumption values from a mobile application they will be likely to adopt it. Hence, study tries to examine how mobile application interactivity provides several consumption values which ultimately leads to users' adoption behaviour. Study proposes how consumption values lead the effect of mobile application interactivity on users' adoption behaviour in bookkeeping application context. The study also examines how users' involvement moderates the effects of perceived interactivity on consumption values from shopkeeper perspective.

The study has multiple academic contributions. Firstly, study contributes to mobile application literature by examining the effect of interactivity on user adoption behaviour in bookkeeping context. Secondly, it extends the application of TCV model in the bookkeeping adoption behaviour context. Finally. The study also contributes the users' involvement literature by examining the moderating effect of it in new context (bookkeeping application). Practically, study provides several insightful recommendations to bookkeeping application service providers, helping them develop suitable marketing strategies to influence users' adoption intention. the study also suggest service providers how they can enhance users' perceived consumption values by provide interactive interface to encourage to adopt and use bookkeeping application.

2. LITERATURE REVIEW

2.1 Theory of Consumption Values (TCV)

The TCV (Sheth et al., 1991) identifies five types of consumption values namely, functional value, emotional value, social value, conditional value, and epistemic value during services consumption. According to this theory, consumers decide to adopt a specific service if they believe that they will receive values. In this study we have used TCV to examine users' usage intention towards bookkeeping applications because of several reasons. First, TCV has extensively used in the prior literature to examine users' behavioural intention in different contexts (Barnes and Mattsson, 2016; Kaur et al., 2018; Talwar et al., 2020). Second, TCV provide multifaceted view of consumption values and provide both cognitive and affective perspective for better explanation of users' consumption values (Talwar et al., 2020). Finally, users' perceived value plays crucial role in adoption and usage of mobile commerce application (Jebarajakirthy and Shankar, 2021) hence, TCV is best suitable theory to examine the users' behavioural intention in bookkeeping application context.

2.2 Effect of Interactivity on Consumption Values

Interactivity refers to capability of the system to provide better platform for communication between parties involved using interface layout (Yang and Shen, 2017). Interactivity receive significant attention of the researchers in the information stem, communication, consumer behaviour and marketing contexts (Coursaris and Sung, 2012; Lee et al., 2015; Cano et al., 2017; Gan and Balakrishnan, 2017). The interactivity of the application plays crucial role in enhancing users' motivation towards adoption and usage (Shankar et al., 2020). Similarly, in the context of bookkeeping application context, interactivity play major role in reducing consumers' risk and enhancing consumers' intention to use it. Especially interactivity plays crucial role in the context of bookkeeping application compare to website due less screen size, smaller font, and navigation (Shankar, 2021). Further, In the bookkeeping application context, users perceived several consumption values due to better navigation of the application and tend to use it. The application interactivity provides several consumption values including functional value, emotional value, social value, conditional value, and epistemic value which motivate users to adopt bookkeeping applications.

2.2.1 Functional Value

The first type of consumption value is functional value, functional values also termed as utilitarian value (Barnes and Mattsson, 2016) means the perceived performance of the product and services. The functional values are related to the functional and physical features of the products and services (Lee et al., 2015). In the previous literature, several studies determined the importance of functional values on consumer behavioural intention in several contexts (Jamrozky and Lawonk, 2017; Kim et al., 2018; Chang et al., 2019; Talwar et al., 2020). In the bookkeeping application context, the interactivity of the application plays crucial role in enhancing the users' functional values. Better navigation and interactive interface of the application make it easy to use. Because of better navigation, users can explore all available facility easily and maintain their account in easy manner. The interactivity of the application also allows users to maintain their account and manage their credit system in easy manner. Further, bookkeeping application provide several payment options to make payment and users can easily check their transactions which provide them better user control. Hence, users receive several functional values due to interactive interface of the application which leads to positive users' intention towards bookkeeping application. Hence, following hypothesis is proposed:

H1: Interactivity of bookkeeping application positively influences users' perceived functional value.

2.2.2 Emotional Value

The second type of value is the emotional value which posits that users' perceived emotions and feelings relating to a product or service influence their behavioural intention (Lee et al. 2015). Emotional values mean the sentimental and affective benefits perceived by users during the service consumption (Talwar et al., 2020). The emotional value also refers to hedonic values which includes joy, happiness, pleasure, and fun during service consumption (Cao et al., 2019; Shankar and Jain, 2021). Emotional values are about fulfilling consumers' desire for excitement, pleasure and fun during usage of product and services (Shankar and Jain, 2021). In the bookkeeping application context, better application navigation make bookkeeping process easy and useful and provide several emotional values to the users (Jebarajakirthy and Shankar, 2021). The bookkeeping application make account management process easy and hence, users receive several emotional values. Further, bookkeeping application provides information using interactive content such as, image, GIF, video, and symbols which make account management process easy and provide emotional values to the users (Shankar and Rishi, 2020). Hence, following hypothesis is proposed:

H2: Interactivity of bookkeeping application positively influences users' perceived emotional value.

2.2.3 Social Value

The social value is the third type of consumption value which refers to users' perceptions of social acceptance or social belongingness resulting from using and consuming a product or a service (Karjaluoto et al., 2019). The literature suggested that social values play crucial role in developing positive responses towards service providers in different contexts (Morosan and DeFranco, 2016; Lei et al., 2019; Shankar and Jain, 2021; Talwar et al., 2020). In the study context, bookkeeping application provides several means to the users to connect with their consumers which provides several social values to the users. Moreover, using bookkeeping application users can exchange the information with consumers. Further, by using bookkeeping application users want to be socially accepted hence intent to use bookkeeping application. Hence, following hypothesis is proposed:

H3: Interactivity of bookkeeping application positively influences users' perceived social value.

2.2.4 Conditional Value

The final type of consumption value is conditional value which refers to the values derived from a complimentary product or service associated with the main product or service (Karjaluoto et al., 2019). The conditional values also outcome of some specific situation which consumers face during service consumption (Talwar et al., 2020). In the previous literature, several studies determined the effect of conditional values on consumer behavioural intention in several contexts (Phau et al., 2014; Hu and Yang, 2019; Talwar et al., 2020). Bookkeeping application provide several complimentary services such as SMS/WhatsApp services and one stop payment solution for managing the account in efficient way which motivate users to adopt and use bookkeeping applications. Hence, following hypothesis is proposed:

H4: Interactivity of bookkeeping application positively influences users' perceived conditional value.

2.2.5 Epistemic Value

The next perceived consumption value is epistemic value which refers to customers' perceptions of uniqueness provided by service providers (Suki, 2016). The epistemic values also includes the service providers' capability to incite the curiosity of the consumers (Talwar et al., 2020). In the previous literature, several studies determined the positive impact of epistemic value on consumers' behavioural intention in different contexts (Ashton, 2015; Mäntymäki and Salo, 2015; Thomé et al., 2018; Talwar et al., 2020). Bookkeeping application provides unique solution to the users to in managing their account and provide all required information. There are several unique features in the bookkeeping applications such as online payment collection, payment reminders, and multi-lingual content which provide epistemic values to the users. Hence, following hypothesis is proposed:

H5: Interactivity of bookkeeping application positively influences users' perceived epistemic value.

2.4 Impact of Perceived Consumption Values on Adoption Intention

Consumers' perceived consumption values play crucial role in shaping consumer behavioural intention (Shankar and Jain, 2021). Hence, in prior literature, several studies determined the positive effects of consumption values on consumer behavioural intention in several contexts (Mohd-Any et al., 2014 ; Mäntymäki and Salo, 2015; Carlson et al., 2015; Dhir et al., 2018; Kaur et al., 2018; Jang et al., 2019; Talwar et al., 2020; Shankar and Jain, 2021; Zeba et al., 2020; Thanigan et al., 2021). Different types of consumption values namely, functional value, emotional value, social value, conditional value, and epistemic value plays crucial role in framing consumer behavioural intention (Sheth, 1991; Talwar et al., 2020). Similarly, in the bookkeeping applications context, if users perceived several consumption values they tend to adopt and use it. Bookkeeping application provides several functional values to the users. Users can easily manage their account by using bookkeeping application. Users also receive several emotional values in managing their account and transaction using bookkeeping application. Further, users also can connect with their consumers using bookkeeping application. Moreover, bookkeeping application also provides several complementary services to the users which enhances their usage intention. Finally, bookkeeping application provide one stop cost effective solution to the SMEs and shopkeepers in managing their accounts in easy manner. Hence, users tend to adopt and use bookkeeping application. Based on above discussion, following hypotheses have been proposed:

H6: Perceived functional value positively influences bookkeeping application adoption.

H7: Perceived emotional value positively influences bookkeeping application adoption.

H8: Perceived social value positively influences bookkeeping application adoption.

Table 1. Literature summary

Authors (Year)	Topic	Sample	Context	Method	Findings
Dholakia and Zhao (2009)	Retail web site interactivity How does it influence customer satisfaction and behavioral intentions?	270	Retail web site	Experimental	Empirical results support that both objective and subjective interactivity positively impact online shoppers' satisfaction and behavioral intentions.
Yoo et al. (2010)	The role of interactivity in e-tailing: Creating value and increasing satisfaction	427	E-tailing	Cross-sectional survey	The results indicate that bi-directionality is a key interactivity feature for consumers' hedonic value creation in e-tailing service settings.
Chang (2018)	Understanding social networking sites continuance The perspectives of gratifications, interactivity and network externalities	255	Social networking sites	Cross-sectional survey	The results show that machine interactivity and person interactivity positively impact social gratifications
Wu (2019)	Website interactivity may compensate for consumers' reduced control in E-commerce	240	E-Commerce	Experimental	Results indicated that interactivity positively influence product attitude
Brüggen et al. (2019)	Interactivity in online pension planners enhances engagement with retirement planning – but not for everyone	285	Online pension plan	Experimental	Results indicate positive effect of interactivity on number of clicked options and participants' intention to check their personal pension situation
Cheung et al. (2020)	Driving consumer–brand engagement and co-creation by brand interactivity	408	Smartphone	Cross-sectional survey	Results suggested that Entertainment interactivity, cognitive information-transfer interaction and information interactivity influencing consumer–brand engagement, consumers' intention to co-create brand value, and to repurchase the brand
Wang et al. (2020)	How to enhance solvers' continuance intention in crowdsourcing contest The role of interactivity and fairness perception	306	Crowdsourcing	Cross-sectional survey	Finding suggested that motivation and platform trust together fully mediate the effect of interactivity on continuance intention

H9: Perceived conditional value positively influences bookkeeping application adoption.

H10: Perceived epistemic value positively influences bookkeeping application adoption.

2.5 Moderating Effects of Users' Involvement

The users' involvement refers to perceived relevance of specific product and service depending on their need, interest and preference (Shankar et al., 2020). Consumers' involvement plays crucial role in adoption and usage behaviour and hence, previous studies identified the crucial impact of consumer involvement in different contexts (Gamliel et al., 2013; Gohary et al., 2016; Algharabat et al., 2018; Shankar and Jebarajakirthy, 2019; Shankar et al., 2020). Similarly, in bookkeeping application context, users' involvement plays crucial role in framing users' behavioural intention. prior literature suggested that consumer' adoption intention varies based on their involvement (Shankar and Jebarajakirthy, 2019). Consumers with high involvement tends to adopt new technology or solution compare to consumers having less technological involvement (Shankar et al., 2020). Similarly, in the study context, users who have high involvement actively adopt and use bookkeeping application whereas, low involved users are sceptic towards using it. Users having high involvement are aware of different benefits offered by bookkeeping application and they always tend to try new technology compare to users having less involvement (Shankar et al., 2020). Further, consumer cognitive evaluation of the environmental cues varies based on consumer involvement (Shankar and Jebarajakirthy, 2019). Similarly, the users' evaluation of bookkeeping application interactivity varies based on involvement levels. Users having high involvement, perceived more consumption values towards interactive features of the bookkeeping application compare to users having less involvement. High-involved users spent more time in evaluation different interactive features of bookkeeping application and hence, perceived more consumption values compare to low-involved users (Im and Ha, 2011). Hence, users having high involvement receive several consumption values including functional values, emotional values, social values, conditional values, and epistemic values due to interactive bookkeeping application. Whereas, users having less involvement receive less consumption values. In other words, users' involvement moderates the effect of interactivity on perceived consumption values. Hence, following hypotheses have been proposed:

H11: The influence of interactivity on (a) function values (b) emotional values (c) social values (d) conditional values (e) and epistemic values is s stronger for high-involved users compare to low-involved users.

3. RESEARCH METHOD

3.1 Sampling and Data Collection

The study was carried out in India and SMEs and shopkeepers was selected as respondents. Since India stands second in the world in terms of internet and mobile phone penetration hence, there is enormous growth potential for the mobile application adoption (Shankar et al. 2020). Accordingly, responses for this study were collected from the SMEs and shopkeepers in India. The online structured questionnaire was used for the collecting responses. The SMEs and shopkeepers who have registered themselves over Facebook marketplace were approached to provide the responses. A total of 500 SMEs and shopkeepers were approached and 298 responses were received. After, deleting incomplete responses, a total of 276 (52.8% female) responses were used for further analysis. In terms of age group 31.5% were between 18 and 30 years, 36.6% were between 31 and 45 years, 20.2% were between 46 and 60, and the rest were over 60 years. Finally, regarding education, 12.3% had a secondary or below qualification, 19.2% had a higher secondary degree, 39.4% had a bachelor's degree, and rest had a postgraduate degree.

3.2 Measures and Instrument Development

The survey items were obtained from the previous validated scales, but it was ensured that scales suit study context. The final instrument was examined for content validity by two senior marketing professionals, two IT specialists, and Two professors. The minor changes were made in the questionnaire based on suggestions received by them. The first section of the questionnaire contains items measuring constructs of the study and the second section contains questions regarding respondents' demographic profile. The measures for perceived interactivity was operationalised using seven items obtained from Cyr et al. (2009). Four items measuring functional values, four items measuring social values, three items measuring conditional values, and three items measuring epistemic values were obtained from Talwar et al. (2020) whereas social values were operationalised using three items taken from Lee et al. (2015). Involvement was operationalised using four items taken from Gohary et al. (2016). Three items measuring adoption intention have been taken from Shankar et al. (2020). All the constructs used a five-point measurement scale (i.e. 1 = strongly disagree; 5 = strongly agree).

3.3 Common Method Bias

Since data for both dependent and independent variables were collected from the same respondents common method bias (CMB) may occur. We, therefore, examined for CMB using several methods. First, a unrelated marker variable, was added in the questionnaire and correlation between the marker variable and study variables found to be low (Malhotra et al., 2006) indicating absence of CMB. Second, common latent factor test indicates that the differences in the factor loading of the items on the underlying latent construct is less than 0.2 (Podsakoff et al., 2003) in comparison with and without common latent factor.

4. ANALYSIS

4.1 Measurement Model

The measurement model was assessed to ensure the constructs' measurement properties (i.e., dimensionality, reliability, and validity). Results indicated in Table 2 shows that for all items in all the constructs, factor loading scores were greater than 0.70. Composite reliability values were above threshold value of 0.70 (Hair et al., 2010). Convergence validity is checked using the average variance explained (AVE) values above the threshold value of 0.50 for all the constructs (Hair et al., 2010). The CFA presented good model fit ($X^2/df = 1.86$, $CFI = .95$, $TLI = .94$, $RMSEA = .05$). In order to determine the discriminant validity the square root of AVE was compared with the shared correlation between the factors, the result presented in the table 3 indicate that the AVE for all the items were greater than the corresponding square coefficients conforming the discriminant validity (Fornell and Larcker, 1981). In addition, Cronbach's Alpha coefficients for all variables were above threshold value 0.7. which indicate that scale is consistent.

4.2 Hypothesis Testing

The SEM used for validating the hypotheses also resulted in acceptable model fit ($X^2/df = 2.67$, $CFI = .91$, $TLI = .90$, $RMSEA = .07$) (Hair et al., 2010). The model explained 68.6% variance for the bookkeeping adoption intention.

The results presented in Table 3 show that interactivity has a significant positive effect on functional value ($\beta = 0.29$, $p < 0.001$), emotional value ($\beta = 0.34$, $p < 0.001$), social value ($\beta = 0.59$, $p < 0.001$), conditional value ($\beta = 0.68$, $p < 0.001$), and epistemic value ($\beta = 0.56$, $p < 0.001$), supporting H_1 , H_2 , H_3 , H_4 , and H_5 . Further, results also indicated that functional value ($\beta = 0.14$, $p < 0.01$), emotional value ($\beta = 0.75$, $p < 0.001$), and epistemic value ($\beta = 0.13$, $p < 0.05$) significantly increase bookkeeping adoption intention, hence H_6 , H_7 , and H_{10} were also supported. However, social value ($\beta = -0.06$,

Table 2. Reliability and Validity of measurement scale

Variables and items	FL
Perceived Interactivity (AVE= 0.70, CR= 0.94, α= 0.94)	
Users have control over the information display format, condition when using this bookkeeping application	0.816
Users have control over the content of bookkeeping application that they want to see	0.877
Users share experiences about the product or service with other customers of this bookkeeping application	0.907
The information shown when I interact with the bookkeeping application is relevant	0.928
The information shown when I interact with the bookkeeping application meet my expectations	0.832
The information shown when I interact with the bookkeeping application is suitable	0.771
The information shown when I interact with the bookkeeping application is useful	0.707
Functional Value (AVE= 0.52, CR= 0.81, α= 0.81)	
The bookkeeping application has consistent quality	0.725
The bookkeeping application is well designed	0.764
The bookkeeping application would perform consistently	0.718
The bookkeeping application offers several benefits	0.684
Emotional Value (AVE= 0.69, CR= 0.87, α= 0.86)	
Using the bookkeeping application would be enjoyable	0.882
Using the bookkeeping application would be fun	0.915
Using the bookkeeping application would pleasure	0.682
Social Value (AVE= 0.65, CR= 0.88, α= 0.87)	
Using the bookkeeping application would help me to feel acceptable	0.699
Using the bookkeeping application would improve the way that I am perceived	0.846
Using the bookkeeping application would make a good impression on other people	0.903
Using the bookkeeping application would give social approval	0.75
Conditional Value (AVE= 0.57, CR= 0.80, α= 0.81)	
I would use bookkeeping application more often if it offered better promotional incentive	0.808
I would use bookkeeping application more often if it offered better account management	0.695
I would use bookkeeping application more often if more properties of my preference join it	0.767
Epistemic Value (AVE= 0.69, CR= 0.87, α= 0.87)	
I would like to obtain substantial information about the terms and conditions over bookkeeping application	0.809
I would like to acquire a great deal of information about the benefits offered bookkeeping application	0.835
Bookkeeping application would help me to know about a variety of properties and their offerings	0.858
Involvement (AVE= 0.71, CR= 0.91, α= 0.898)	
Using bookkeeping application would be valuable	0.836
Using bookkeeping application would be involving	0.861
Using bookkeeping application would be needed	0.816
Using bookkeeping application would be relevant	0.853
Adoption Intention (AVE= 0.66, CR= 0.85, α= 0.85)	
I intend to use bookkeeping application in the future	0.737
I expect that I would use bookkeeping application in the future	0.913
I will make an effort to use bookkeeping application in the future	0.778

Notes: AVE= Average variance extracted, CR= Composite reliability, α = Cronbach's alpha coefficient, FL= Factor loading

Table 3. Discriminant validity

Constructs	1	2	3	4	5	6	7	8
1. Perceived Interactivity	0.83							
2. Functional Value	0.28	0.72						
3. Emotional Value	0.32	0.39	0.83					
4. Social Value	0.56	0.16	0.27	0.81				
5. Conditional value	0.65	0.19	0.33	0.12	0.75			
6. Epistemic Value	0.54	0.31	0.49	0.41	0.52	0.83		
7. Adoption Intention	0.34	0.43	0.12	0.27	0.35	0.51	0.84	
8. Involvement	0.24	0.40	0.43	0.20	0.20	0.34	0.53	0.81

Note: Diagonal value indicates the square root of AVE of individual latent construct.

$p > 0.05$) and conditional value ($\beta = 0.09$, $p > 0.05$) have no significant impact on bookkeeping adoption intention, hence H_8 and H_9 are not supported.

Next, the moderating effects of user involvement on the association between interactivity and consumption values (H_{11}) were examined. The moderation analysis conducted using model 1 in PROCESS macro. Table 4 indicated that user involvement significantly moderate the relationship between perceived interactivity and functional value ($\beta = 0.25$; $LLCI = 0.0205$ and $ULCI = 0.4805$), emotional value ($\beta = 0.12$ $LLCI = 0.0345$ and $ULCI = 0.2085$), epistemic value ($\beta = 0.13$; $LLCI = 0.0284$ and $ULCI = 0.2409$). Hence, H_{11a} , H_{11b} , and H_{11c} were supported. However, user involvement does not moderate the relationship between perceived interactivity and social value ($\beta = 0.13$; $LLCI = -0.0315$ and $ULCI = 0.3057$), conditional value ($\beta = 0.067$; $LLCI = -0.0929$ and $ULCI = 0.2268$). Hence, H_{11c} and H_{11d} were not supported. Further, Figure 2 represents that at high levels of user involvement, perceived interactivity is more positively and significantly associated with functional value, emotional value, and epistemic value than at low levels of user involvement.

Table 4. Structural model results

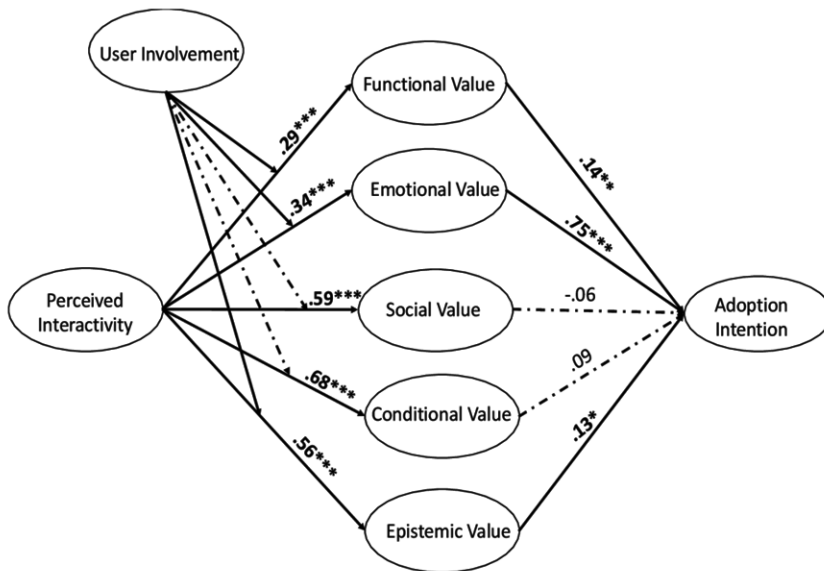
Path	β	SE	Hypotheses
Perceived interactivity → Functional value	0.29***	0.1	Supported
Perceived interactivity → Emotional value	0.34***	0.11	Supported
Perceived interactivity → Social value	0.59***	0.08	Supported
Perceived interactivity → Conditional value	0.68***	0.08	Supported
Perceived interactivity → Epistemic value	0.56***	0.11	Supported
Functional value → Adoption intention	0.14**	0.04	Supported
Emotional value → Adoption intention	0.75***	0.04	Supported
Social value → Adoption intention	-0.06ns	0.06	Not Supported
Conditional value → Adoption intention	0.09ns	0.06	Not Supported
Epistemic value → Adoption intention	0.13*	0.04	Supported

Notes: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Fit indices CMIN/DF = 2.67 ($p < 0.001$), CFI = 0.90, TLI = 0.90, RMSEA = 0.07. CFI = comparative fit index, TLI = Tucker-Lewis index, RMSEA = root mean square error of approximation.

Table 5. Moderation effect of user involvement

Paths	Effects	BootSE	Bootstrap 95% CIs		Hypotheses
			Lower	Upper	
Perceived interactivity→ Functional value	0.2505	0.1168	0.0205	0.4805	Supported
Perceived interactivity→ Emotional value	0.1215	0.0442	0.0345	0.2085	Supported
Perceived interactivity→ Social value	0.1371	0.0856	-0.0315	0.3057	Not Supported
Perceived interactivity→ Conditional value	0.067	0.0812	-0.0929	0.2268	Not Supported
Perceived interactivity→ Epistemic value	0.1347	0.0539	0.0284	0.2409	Supported

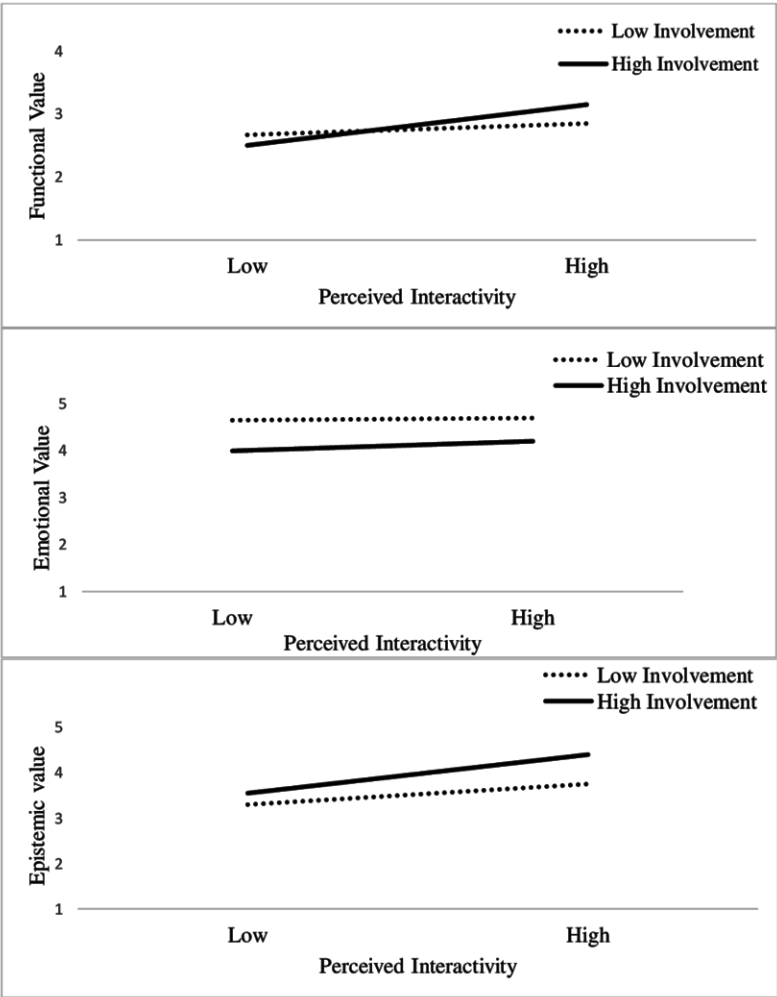
Figure 1. Conceptual framework



5. DISCUSSION

The results indicated that perceived interactivity positively influence perceived consumption values such as function value, emotional value, social value, conditional value, and epistemic value. The literature suggests that mobile application interactivity plays crucial role in enhancing consumers' perceived consumption values (Jebarajakirthy and Shankar, 2021; Talwar et al., 2020). If, service providers interact with consumers using interactive platforms, they tend to receive several values (Shankar and Jain, 2021). Consumers find interactive application more functional and receive more emotional, social conditional, and epistemic values. Finding also suggest that functional value, emotional value, and epistemic value enhances users' bookkeeping adoption intention. The above findings are alien with previous literature (Dhir et al., 2018). If users find bookkeeping application useful, receive hedonic benefits and get relevant information they tend to adopt it. However, results indicated the social value and conditional value have no impact on bookkeeping adoption intention. As users tend to adopt bookkeeping application for mange account only hence, the social value and conditional value have no impact on user choice.

Figure 2. Effects of interactivity on (a)perceive function value, (b) perceive emotional value, and (c) perceive epistemic value for low and high users' involvement



Furthermore, results indicated the users' involvement positively moderates the association between perceived interactivity and functional value, emotional value, epistemic value. The high-involved users receive more utility, joy and information over interactive bookkeeping application compare to users having less involvement towards bookkeeping application. As high-involved consumers spent significant amount of time and hence receive serval utility and joy. Moreover, high-involved users found interactive bookkeeping application trusted source for receiving and sharing information for account management compare to low-involved users. Whereas, high-involved users receive similar social values and conditional values over bookkeeping application compare to low-involved users. As user receive similar social value and conditional over application irrespective of their involvement level.

6. THEORETICAL CONTRIBUTIONS

The study makes several academic contributions to the extant literature. The findings of the study contribute to the newly emerged account management concept. This study also enriches adoption

intention, interactivity, perceived value, and TCV theory literature. The study carries several theoretical contribution; first, account management is a crucial issue face by SMEs and shopkeepers, and research on bookkeeping application adoption intention is still in its infancy. Hence, it is warranted to explore the factors affecting users' bookkeeping application adoption intention. This study propose a framework to examine the users' adoption behaviour in bookkeeping application context. Specifically, impact of application interactivity on bookkeeping adoption intention via perceived consumption values was examined. Thus, this study contributes to providing a deeper understanding of bookkeeping application phenomenon.

Second, Previous literature investigated the effect of mobile application interactivity on consumer responses, but very few studies investigated the impact of mobile application interactivity on SMEs and shopkeepers responses. This study contributes the mobile application interactivity literature as it examines how mobile application interactivity leads to users' bookkeeping application adoption intention via perceived consumption value.

Further, consumer perceived consumption values play a crucial role in consumers' behavioural intention. This study examines how different consumption values such as functional value, emotional value, social value, conditional value, and epistemic value play role in bookkeeping application adoption intention contexts from SMEs and shopkeepers perspective. Hence, the study also contributes to the perceived consumption value literature.

Moreover, The impact of mobile application interactivity on users' behavioural intention in bookkeeping context is not straightforward; rather it is a mechanism. Hence, to understand this mechanism, comprehensive framework is required. Therefore, this study contributes to the behavioural intention in bookkeeping application context by examining the intervening impact of perceived consumption values and users' involvement on the relationship between mobile application interactivity and adoption intention.

Finally, this study also enriches TCV theory literature by applying this theory in the context of consumer response towards bookkeeping application. Thus, the concerns identified in our study add to TCV theory. This study enriches the TCV literature by proposing a conceptual framework for better understanding of the bookkeeping application adoption intention from SMEs perspective.

7. MANAGERIAL IMPLICATIONS

Practically, the findings of this study are important for bookkeeping application service providers. The findings of the study will help them in designing their application for gaining competitive advantages and enhancing pace of users' adoption intention towards bookkeeping application. In the current scenario, account management is one of the crucial challenges SMEs are facing, hence, they are keen to know how they can manage their accounts efficiently using bookkeeping application.

The study findings will help bookkeeping application service providers in enhancing experience of SMEs during account management. The results indicated that interactivity of the bookkeeping application plays crucial role in enhancing users' perceived consumption values and adoption intention. Hence, bookkeeping application service providers should design the application with updated interactional features, such as rich media content, updated search options, easy access to menu, live complaint tracking facilities, multiple options to connect consumers, real-time information update, payment and credit notification and payment reminder facilities (Islam et al., 2021) to enhance users' consumption values. Marketers may provide colour distinctions for credit and debit transactions for better understanding of the users. Marketers should also provide daily, weekly, monthly, and yearly report on request. Further, users should have option to download the summary report for specific time period. These interactive features will provide more functional, emotional, social, conditional, and epistemic values to the users which will enhance their adoption intention.

Further, the findings suggest that consumption value has a significant impact on bookkeeping application adoption intention; hence, marketers should provide several values mobile bookkeeping

application platform. Specially, functional values, emotional value, and epistemic value significantly affect users' bookkeeping application adoption intention. Hence, bookkeeping application service providers should provide several benefits for managing the accounts in efficient manner. Further, they should also make application easy to use so consumer can receive emotional value and tend to use it. Finally, application should provide relevant and accurate information to enhance users' experience over bookkeeping application.

Finally, results indicated that users' involvement towards mobile application positively moderate the effects of consumption values on adoption intention. Hence, marketers should enhance consumer experience to enhance their involvement towards application.

8. LIMITATIONS AND FUTURE SCOPE OF RESEARCH

Even though this study has multiple academic and practical implications, it has a few limitations that should be acknowledged. First, the study is confined to the bookkeeping application in India. Hence, generalising the findings is questionable. Hence, proposed model needs to be evaluated in other contexts and country for a better external validity. Second, the cross-sectional data were used to examine the hypothesis. Future studies may carry out a longitudinal survey-based study. The study model can be expanded by investigating various other moderating factors that would alter the relationship among interactivity and consumption values. Future researchers can extend this research by identifying and including these factors in the proposed model. Moreover, we did not examine the moderating effects of user involvement on the impact of perceived consumption values on adoption intention, in future studies can examined these effects. Finally, users' demographic characteristics such as, age, gender, income, educational qualification play crucial role in framing users' behavioural intention towards mobile application. Hence, future study may examined the moderating effects of users' demographic characteristics on the proposed relationship.

FUNDING AGENCY

Publisher has waived the Open Access publishing fee.

REFERENCES

- Agarwal, J., & Wu, T. (2018). E-commerce in emerging economies: A multi-theoretical and multilevel framework and global firm strategies. In *Emerging Issues in Global Marketing* (pp. 231–253). Springer. doi:10.1007/978-3-319-74129-1_9
- Algharabat, R., Rana, N. P., Dwivedi, Y. K., Alalwan, A. A., & Qasem, Z. (2018). The effect of telepresence, social presence and involvement on consumer brand engagement: An empirical study of non-profit organizations. *Journal of Retailing and Consumer Services*, 40, 139–149. doi:10.1016/j.jretconser.2017.09.011
- Ashton, A. S. (2015). Developing a Tourist Destination Brand Value: The Stakeholders' Perspective. *Tourism Planning & Development*, 12(4), 398–411. doi:10.1080/21568316.2015.1013565
- Barnes, S. J., & Mattsson, J. (2016). Understanding current and future issues in collaborative consumption: A four-stage Delphi study. *Technological Forecasting and Social Change*, 104, 200–211. doi:10.1016/j.techfore.2016.01.006
- Bedi, S. S., Kaur, S., & Lal, A. K. (2017). Understanding Web Experience and Perceived Web Enjoyment as Antecedents of Online Purchase Intention. *Global Business Review*, 18(2), 465–477. doi:10.1177/0972150916668614
- Cano, M. B., Perry, P., Ashman, R., & Waite, K. (2017). The influence of image interactivity upon user engagement when using mobile touch screens. *Computers in Human Behavior*, 77, 406–412. doi:10.1016/j.chb.2017.03.042
- Cao, X., & Yu, L. (2019). Exploring the influence of excessive social media use at work: A three-dimension usage perspective. *International Journal of Information Management*, 46, 83–92. doi:10.1016/j.ijinfomgt.2018.11.019
- Carlson, J., O'Cass, A., & Ahrholdt, D. (2015). Assessing customers' perceived value of the online channel of multichannel retailers: A two country examination. *Journal of Retailing and Consumer Services*, 27, 90–102. doi:10.1016/j.jretconser.2015.07.008
- Chang, Y. W., Hsu, P. Y., & Lan, Y. C. (2019). Cooperation and competition between online travel agencies and hotels. *Tourism Management*, 71, 187–196. doi:10.1016/j.tourman.2018.08.026
- Coursaris, C. K., & Sung, J. (2012). Antecedents and consequents of a mobile website's interactivity. *New Media & Society*, 14(7), 1128–1146. doi:10.1177/1461444812439552
- Cyr, D., Head, M., & Ivanov, A. (2009). Perceived interactivity leading to e-loyalty: Development of a model for cognitive-affective user responses. *International Journal of Human-Computer Studies*, 67(10), 850–869. doi:10.1016/j.ijhcs.2009.07.004
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *JMR, Journal of Marketing Research*, 18(1), 39–50. doi:10.1177/002224378101800104
- Gamliel, E., & Herstein, R. (2013). Involvement moderates the effect of message framing on consumers' perceived monetary gain and product choice. *Journal of Product and Brand Management*, 22(2), 142–152. doi:10.1108/10610421311321013
- Gan, C. L., & Balakrishnan, V. (2017). Enhancing classroom interaction via IMMAP—An Interactive Mobile Messaging App. *Telematics and Informatics*, 34(1), 230–243. doi:10.1016/j.tele.2016.05.007
- Gohary, A., Hamzelu, B., & Alizadeh, H. (2016). Please explain why it happened! How perceived justice and customer involvement affect post co-recovery evaluations: A study of Iranian online shoppers. *Journal of Retailing and Consumer Services*, 31, 127–142. doi:10.1016/j.jretconser.2016.03.013
- Gohary, A., Hamzelu, B., & Alizadeh, H. (2016). Please explain why it happened! How perceived justice and customer involvement affect post co-recovery evaluations: A study of Iranian online shoppers. *Journal of Retailing and Consumer Services*, 31, 127–142. doi:10.1016/j.jretconser.2016.03.013
- Hair Jr, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). SEM: An introduction. *Multivariate data analysis: A global perspective*, 5(6), 629–686.
- Hu, X. S., & Yang, Y. (2020). Determinants of consumers' choices in hotel online searches: A comparison of consideration and booking stages. *International Journal of Hospitality Management*, 86, 102370. doi:10.1016/j.ijhm.2019.102370

- Huang, E. Y., Lin, S. W., & Fan, Y. C. (2015). MS-QUAL: Mobile service quality measurement. *Electronic Commerce Research and Applications*, 14(2), 126–142. doi:10.1016/j.elerap.2015.01.003
- Im, H., & Ha, Y. (2011). The effect of perceptual fluency and enduring involvement on situational involvement in an online apparel shopping context. *Journal of Fashion Marketing and Management*, 15(3), 145–162. doi:10.1108/13612021111151932
- Islam, H., Jebarajakirthy, C., & Shankar, A. (2021). An experimental based investigation into the effects of website interactivity on customer behavior in on-line purchase context. *Journal of Strategic Marketing*, 29(2), 117–140. doi:10.1080/0965254X.2019.1637923
- Jamroz, U., & Lawonk, K. (2017). The multiple dimensions of consumption values in ecotourism. *International Journal of Culture, Tourism and Hospitality Research*, 11(1), 18–34. doi:10.1108/IJCTHR-09-2015-0114
- Jang, S. H., & Shin, J. I. (2019). The Impact of Contextual Offer on Purchase Intention Through Consumption Value in Mobile Service. *Journal of Electronic Commerce in Organizations*, 17(1), 30–38. doi:10.4018/JECO.2019010103
- Jebarajakirthy, C., & Shankar, A. (2021). Impact of online convenience on mobile banking adoption intention: A moderated mediation approach. *Journal of Retailing and Consumer Services*, 58, 102323. doi:10.1016/j.jretconser.2020.102323
- Karjaluto, H., Shaikh, A. A., Saarijärvi, H., & Saraniemi, S. (2019). How perceived value drives the use of mobile financial services apps. *International Journal of Information Management*, 47, 252–261. doi:10.1016/j.ijinfomgt.2018.08.014
- Kaur, P., Dhir, A., Rajala, R., & Dwivedi, Y. (2018). Why people use online social media brand communities. *Online Information Review*, 42(2), 205–221. doi:10.1108/OIR-12-2015-0383
- Kim, E., Tang, L. R., & Bosselman, R. (2018). Measuring customer perceptions of restaurant innovativeness: Developing and validating a scale. *International Journal of Hospitality Management*, 74, 85–98. doi:10.1016/j.ijhm.2018.02.018
- Lee, C. K., Levy, D. S., & Yap, C. S. F. (2015). How does the theory of consumption values contribute to place identity and sustainable consumption? *International Journal of Consumer Studies*, 39(6), 597–607. doi:10.1111/ijcs.12231
- Lei, S. I., Wang, D., & Law, R. (2019). Perceived technology affordance and value of hotel mobile apps: A comparison of hoteliers and customers. *Journal of Hospitality and Tourism Management*, 39, 201–211. doi:10.1016/j.jhtm.2019.02.006
- Mäntymäki, M., & Salo, J. (2015). Why do teens spend real money in virtual worlds? A consumption values and developmental psychology perspective on virtual consumption. *International Journal of Information Management*, 35(1), 124–134. doi:10.1016/j.ijinfomgt.2014.10.004
- Mohd-Any, A. A., Winklhofer, H., & Ennew, C. (2015). Measuring users' value experience on a travel website (e-value) what value is cocreated by the user? *Journal of Travel Research*, 54(4), 496–510. doi:10.1177/0047287514522879
- Morosan, C., & DeFranco, A. (2016). Co-creating value in hotels using mobile devices: A conceptual model with empirical validation. *International Journal of Hospitality Management*, 52, 131–142. doi:10.1016/j.ijhm.2015.10.004
- Pandey, J., & Sohani, S. S. (2020). Engaging Stakeholders of Crowdsourced Work: Case of Cab Aggregators of India. *Journal of Electronic Commerce in Organizations*, 18(3), 38–52. doi:10.4018/JECO.2020070103
- Phau, I., Quintal, V., & Shanka, T. (2014). Examining a consumption values theory approach of young tourists toward destination choice intentions. *International Journal of Culture, Tourism and Hospitality Research*, 8(2), 125–139. doi:10.1108/IJCTHR-12-2012-0090
- Shankar, A. (2021). How does convenience drive consumers' webrooming intention? *International Journal of Bank Marketing*, 39(2), 312–336. doi:10.1108/IJBM-03-2020-0143
- Shankar, A., & Datta, B. (2018). Factors affecting mobile payment adoption intention: An Indian perspective. *Global Business Review*, 19(3, suppl), S72–S89. doi:10.1177/0972150918757870

- Shankar, A., & Datta, B. (2019). Measuring Mobile Commerce Service Quality: A Review of Literature. *M-Commerce: Experiencing the Phyigital Retail*, 319.
- Shankar, A., Datta, B., & Jebarajakirthy, C. (2019). Are the generic scales enough to measure service quality of mobile banking? A comparative analysis of generic service quality measurement scales to mobile banking context. *Services Marketing Quarterly*, 40(3), 224–244. doi:10.1080/15332969.2019.1630176
- Shankar, A., Datta, B., Jebarajakirthy, C., & Mukherjee, S. (2020a). Exploring Mobile Banking Service Quality: A Qualitative Approach. *Services Marketing Quarterly*, 41(2), 182–204. doi:10.1080/15332969.2020.1742982
- Shankar, A., & Jain, S. (2021). Factors affecting luxury consumers' webrooming intention: A moderated-mediation approach. *Journal of Retailing and Consumer Services*, 58, 102306. doi:10.1016/j.jretconser.2020.102306
- Shankar, A., Jebarajakirthy, C., & Ashaduzzaman, M. (2020). How do electronic word of mouth practices contribute to mobile banking adoption? *Journal of Retailing and Consumer Services*, 52, 101920. doi:10.1016/j.jretconser.2019.101920
- Shankar, A., & Kumari, P. (2016). Factors affecting mobile banking adoption behavior in India. *Journal of Internet Banking and Commerce*, 21(1), 1–24.
- Shankar, A., & Rishi, B. (2020). Convenience matter in mobile banking adoption intention? *Australasian Marketing Journal*, 28(4), 273–285. doi:10.1016/j.ausmj.2020.06.008
- Shankar, A., Tiwari, A. K., & Gupta, M. (2021). Sustainable mobile banking application: A text mining approach to explore critical success factors. *Journal of Enterprise Information Management*.
- Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business Research*, 22(2), 159–170. doi:10.1016/0148-2963(91)90050-8
- Suki, N. M. (2016). Consumer environmental concern and green product purchase in Malaysia: Structural effects of consumption values. *Journal of Cleaner Production*, 132, 204–214. doi:10.1016/j.jclepro.2015.09.087
- Talwar, S., Dhir, A., Kaur, P., & Mäntymäki, M. (2020). Why do people purchase from online travel agencies (OTAs)? A consumption values perspective. *International Journal of Hospitality Management*, 88, 102534. doi:10.1016/j.ijhm.2020.102534
- Thanigan, J., Reddy, S. N., Sethuraman, P., & Rajesh, J. I. (2021). Understanding Consumer Acceptance of M-Wallet Apps: The Role of Perceived Value, Perceived Credibility, and Technology Anxiety. *Journal of Electronic Commerce in Organizations*, 19(1), 65–91. doi:10.4018/JECO.2021010104
- Thomé, K. M., Pinho, G. M., & Hoppe, A. (2019). Consumption values and physical activities: Consumers' healthy eating choices. *British Food Journal*, 121(2), 590–602. doi:10.1108/BFJ-12-2017-0683
- Thompson, F. M., Tuzovic, S., & Braun, C. (2019). Trustmarks: Strategies for exploiting their full potential in e-commerce. *Business Horizons*, 62(2), 237–247. doi:10.1016/j.bushor.2018.09.004
- Yadav, R., & Mahara, T. (2019). Factors affecting e-commerce adoption by handicraft SMEs of India. *Journal of Electronic Commerce in Organizations*, 17(4), 44–57. doi:10.4018/JECO.2019100104
- Yang, F., & Shen, F. (2018). Effects of web interactivity: A meta-analysis. *Communication Research*, 45(5), 635–658. doi:10.1177/0093650217700748
- Zeba, F., Shaheen, M., & Krishnankutty, R. (2020). Hedonic and utilitarian values behind engagement of online consumers. *Journal of Electronic Commerce in Organizations*, 18(3), 1–20. doi:10.4018/JECO.2020070101