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Review Article

What Factors Determine the Online Consumer Behavior in This Digitalized World? A Systematic Literature

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This review study envisioned to address the basic objective that is to investigate determinants of online consumer behavior. A conventional review strategy was used to address the objective raised above, i.e., systematic strategy, and also, the obtained data were analyzed via content analysis. In addition to the above, the study also employed descriptive research design to present the obtained result descriptively. According to the generated findings, purchase intention is the most studied area, which is followed by adoption, and conversely, continuance or repurchase stage of online consumer behavior is the most underresearched area. Perceived usefulness, perceived risk, attitude, perceived ease of use, trust, social influence, subjective norms, perceived enjoyment, security, perceived behavioral control, web design quality, privacy and security concerns, demographic factors (e.g., age, gender, occupation, education, and income), perceived value, service quality, perceived satisfaction, psychological factors (e.g., relative advantage), facilitating conditions, and consumers' experience are the most influential factors significantly affecting online consumer behavior at large. Therefore, it is advised that industries those are experienced or newcomers in the market to work on the identified factors determining the online consumer behavior, to sustain and achieve success in this dynamic world.

1. Introduction

The society that we live in is in a continuous state of change [1]. The changed lifestyle of individual consumers, for instance, has changed their way of doing things such as consumption patterns [2–4]. Such patterns have changed numerous times in history [5–7]. For example, approximately 100 years ago, consumption occurred in the form of bartering or purchases made by traveling merchants [8, 9]. Since then, purchases have been made by means of catalogs, retail or boutique stores, and convenience stores like supermarkets and department stores [9–11].

These days, the developments in the field of communication, technology, information, and marketing have created new shifts in the way consumers inform and buy certain products and services [12]. In particular, in the last two decades, consumers have become more and more accustomed to using the internet as means to inform themselves about products or services and about other information in general [13]. It has become ever so important for the companies of the 21st century to work on the integration of new technologies and to understand how consumers use the internet [12]; while this day, everything is linked with the World Wide Web, whether it is social interaction or shopping [2]. Companies become aware of the advantages of working on such technologies can bring in order to provide better consumer services [14]. Therefore, in a market environment that is constantly changing, understanding customer buying behavior is decisive for companies to operate successfully and efficiently [15]. And also, understanding consumer behavior is considered the cornerstone for successful marketing, reliable production management, and the success of research and development activities [16].

Different scholars have given their own definitions concerning the concept of consumer behavior from various corners of view but with similar understanding. For instance, Kotler [17] defined as it the study of how people buy, what they buy, when they buy, and why they buy. According to

Jacoby [18], consumer behavior refers to the acquisition, consumption, and disposition of products, services, time, and ideas by decision-making units. It is the study of consumers and the processes they use to choose, use (consume), and dispose of products and services, including consumers' emotional, mental, and behavioral responses [19]. As defined by Schiffman and Kanuk [20], consumer behavior is the behavior that consumers display in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs.

The American Marketing Association on the other hand, defined consumer behavior as the dynamic interaction of affect and cognition, behavior, and the environment by which human beings conduct the exchange aspects of their lives [21]. In this definition, consumer behavior is viewed as a relationship between the environment and the consumer's psychological and emotional state [22]. The environment includes all the things that influence the thoughts, feelings, and actions of consumers [23]. These include advice from other consumers, advertisements, price information, packaging, product appearance, blogs, and many others [24]. It is important to recognize from this definition that consumer behavior is dynamic, involves interactions, and exchange decisions [25, 26]. From the above definitions, therefore, it can be understood that acquisition, consumption, and disposition issues are the main pillar points that have been used to explain the concept of consumer behavior by scholars.

In the modern world, the popularity of the internet is increasing rapidly [27–29] as a result, companies have started investing hundreds of millions of dollars in efforts to establish an electronic presence on the internet [30]. Accordingly, this vital emphasis on the rapid development of the internet has drastically modified the lives of consumers around the world and played an essential role in globalizing and changing the consumer buying process [28, 31]. For example, the expansion of online shopping has provided customers the option to easily compare product characteristics and prices, making it the most flexible way of purchasing [32]. Online shopping also adds great convenience to the life of the people, and they do not have to spend their time going to a store or driving to retail stores [33, 34]. At large, buying online is always a more beneficial deal than visiting retail stores in terms of more various options and time efficiency [35, 36].

In the current global scenario, the growth of online commercial retail transactions has remarkably been obtaining the utmost emphasis; businesses have been undergoing a huge digital transformation [37–39]. For instance, the integration of new digital technologies, digital business models, including platform-based multisided market places, access to information, a global vision, and changes in computation and mobile shopping [40–43]. All of these digital transformations have led to changes in peoples' purchase behavior and consequently, that of the consumer [44]. This day, therefore, consumers, not only those from well-developed countries, but also, those from developing countries are getting used to the new shopping channel [45].

Over the last decade, the number of online shopping portals, the breadth of products available online, and access to fast internet has continuously grown [46]. This development has led to both a maturing of online shopping as a retail channel and profound changes in people's shopping behavior [47, 48]. In 2019/2020, online sales were estimated to account for $3.36 trillion or 13.6% of retail sales globally, representing a 20.2% increase over the previous year. This includes, for instance, 34.1% of total retail sales in China, 21.8% in the UK, and 11% in the US (Ibid.). The sales predicted a growth of up to $4.8 trillion by 2021/2022 [49]. However, online shopping is still in the infancy stage in most developing countries. Statistics indicate that only 15% of African households made an online purchase in 2018 [50]. This situation makes understanding of the determinants of online consumer behavior extremely essential for industries' online business success [51–53].

According to various sources, e.g., Elhoushy and Lanzini [54]; Reed et al. [55]; Tanrikulu [56]; and Zhang et al. [57], online consumer behavior research is a young and dynamic academic domain, which is described by a diverse set of variables studied from multiple theoretical perspectives [58–60]. The Theory of Reasoned Action [61], the Technology Acceptance Model [62], the Theory of Planned Behavior [63], Innovation Diffusion Theory [64, 65], and Flow Theory [66] are some of the theories that have been used by most researchers for investigating online consumer behavior [67, 68].

Online consumer behavior has been the subject of considerable research in the last few years [69], and scholars continue to explain online consumers' behavior from a diverse perspective [70]. Such as website use, future use, purchase, future purchase, unplanned purchase, channel preference, and satisfaction [71]. This hopefully contributes to describing the relationships between key variables that predict and determine consumer behavior in electronic channels (Ibid.). The recent failure of a large number of companies operating online epitomizes the challenges of working via virtual channels and underscores the requirement to better understand key drivers of online consumer behavior [72]. One reason might be that of limited scholarly attention has been devoted to understanding potential factors that influence online consumer behavior [69].

Despite the increasing attention and interest surrounding online consumer behavior in the last decade [73], the studies appear relatively still immature and fragmented with contradictory findings, which exhibits an important research potential. For example, there is a paucity of documented studies that attempt to integrate research findings across studies from a theoretical marketing and consumer behavior perspective [73]. Besides, prior studies have investigated online consumer behavior (e.g. [74–79]), nonetheless, without considering variability often exists among online consumers; let us say, in terms of their a priori preferences or attitude regarding a technology [69].

In particular, online consumer purchase stages are intention, adoption, and continuance, and various studies were carried out these days. For instance, factors affecting consumer's intention (e.g. [80–86]), relationships of consumers'

intention (e.g. [87]), and consumer's adoption (e.g. [28, 88–91]). There are also studies conducted on consumer's continuance, for example, Gidey [34]. However, there is an insignificant number of studies were conducted on the determinants of purchase intention to continuance with regard to online consumer behavior [92–95].

In conclusion, there are shortages of studies in the existing literature on understanding the determinants of online consumer behavior in respect of purchase intention, adoption, and continuance stages in a comprehensive manner in this digitalized world; though there are significant numbers of studies predominantly conducted in relation to the two online purchase stages (purchase intention and adoption). Therefore, this study will investigate determinants of purchase intention to continuance in respect of online consumer behavior, using the Cheung and Chan model.

The main reason for selecting the Cheung and Chan model specific to this study is that it is an integrative model that was developed by Cheung and Chan, which apparently stated the potential online consumer behavior determinants into five major domain areas (individual/consumer characteristics, environmental influences, product/service characteristics, medium characteristics, and online merchant and intermediary characteristics) with major online consumer purchase categories (intention, adoption, and continuance).

1.1. Research Question. The following research question is addressed:

(i) What are the factors determining online consumer behavior using the Cheung and Chan model?

1.2. Objective of the Study. This study was focused on the following objective:

(i) To investigate determinants of online consumer behavior using the Cheung and Chan model

2. Research Methods

2.1. Review Method. This study follows a systematic literature review method to analyze, summarize, and draw inferences [96, 97] from the accessible literature on online consumer behavior. The intention of the current study is to analyze and categorize the available literature on online consumer behavior into different focus areas such as based on the purchase stages (intention, adoption, and continuance) and to identify avenues for future research. This review approach comprises three steps and discusses time horizon, database selection, and article selection.

2.2. Time Horizon for the Selection of Articles. For the review and assessment process, the date of publication of the journal articles considered was between the beginning of 2010 and the beginning of 2022. The year 2010 was chosen as the starting point for collecting the relevant data because extended time gives chance to get rich evidence to answer the raised research questions. As Meline [98] suggests, whatever time period is selected, reviewers are expected to provide sufficient justification for their choice. Likewise, the beginning of 2022 was selected as the endpoint to include the most recent academic journal publications in light of the increase in articles that have addressed this highly significant topic.

2.3. Selection of Databases. This study used a number of online databases to identify current and pertaining literature on online consumer behavior. The studies were carried out in the English language and the sources of online databases were Wiley Online Library, SpringerLink, Emerald Insight, Taylor and Francis, PubMed, Google Scholar, and ScienceDirect. While an attempt was made to include the most articles possible, the present study does not claim that the databases are either complete or exhaustive in nature.

2.4. Article Selection. The current study followed a systematic review procedure as precisely indicated in Figure 1 and described in the following manner. Firstly, keywords were defined as search criteria in online databases. The keywords encompassed "Consumer Behavior," "Internet Shopping," "Online Consumer Behavior," "Online Consumer Purchasing Behavior," "Online Shopping," "E-Tail," "E-Commerce," "E-Shopping," and "Online Consumer Purchasing" in the title of the above-mentioned online databases and contained in all text. Next, every article in the leading academic journals from 2010 to 2022 was considered. 981 articles were selected and the preliminary result included 115 articles.

Then, the abstracts were read to evaluate the relevance of journal articles in online consumer behavior. In this regard, articles that seemed nonrelevant to this study were eliminated to ensure consistent focus and to reduce bias. Further, duplications of articles were eliminated to avoid counting a paper twice in our analysis [99]. This process resulted in 50 articles for review—and that were chosen based on their originality, clearly stated aims, and relevance. Figure 1 presents a summary of the article selection process used by this study.

Concerning the nature of the studies considered under this systematic review, as can be observed in Figure 2, the large majority of the included studies are quantitative in nature, which covers 88% of the total selected studies, followed by mixed (8%), systematic (2%), and narrative (2%) studies.

2.5. Data Analysis. At first, all the online consumer behavior data were collected from the involved studies in this review study. The collected online consumer behavior data were processed iteratively in order to answer the questions raised in the introduction part of this study. In this regard, this study employed a content analysis method to analyze the collected data. According to Elo et al. [100], content analysis is a research tool used to determine the presence of certain words, themes, or concepts within some given data, such as qualitative or quantitative. It is a systematic and quantitative approach to analyzing the content or meaning and describing the phenomenon of an organization [101]. Thus, using this analysis method, researchers and scholars can quantify and analyze the presence, meanings, and relationships of certain words, themes, or concepts, for instance, online consumer behavior [100].

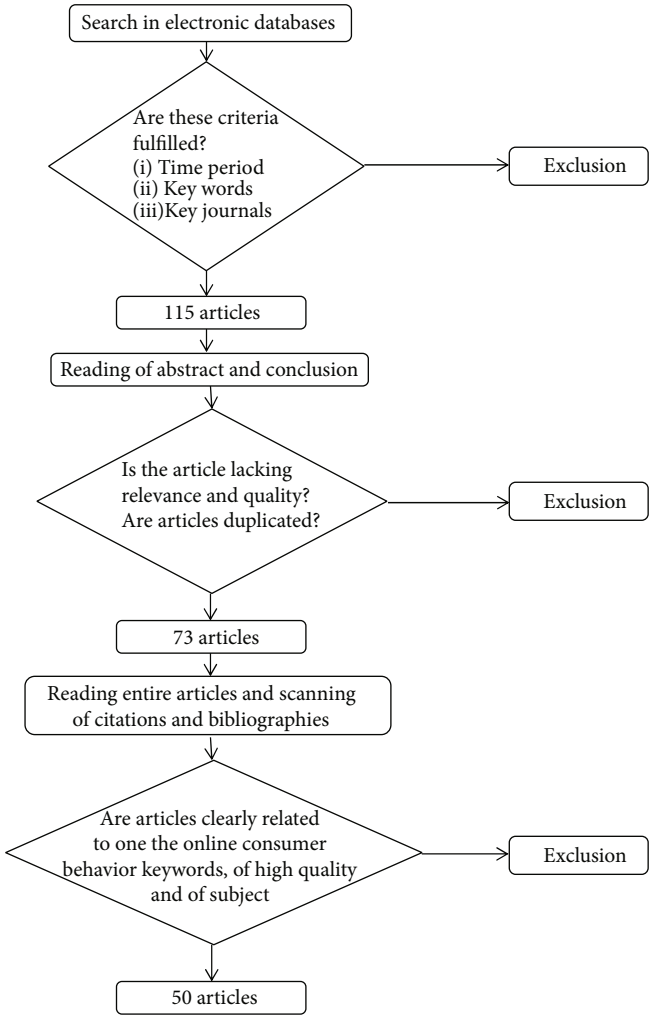
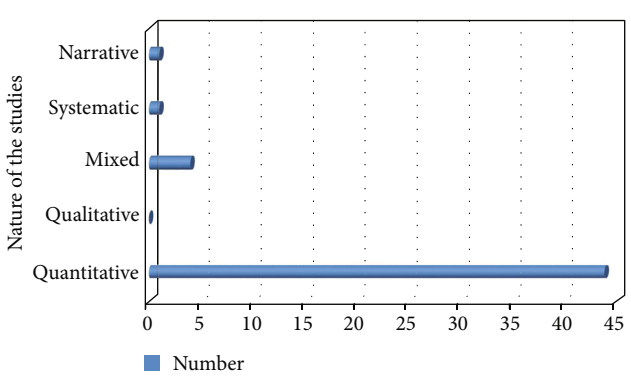


Figure 1: Summary of article selection process. Source: Adapted from Yong et al. [147].



Source: *Own Survey* (2022)

Figure 2: Nature of the studies.

3. Discussions of Findings

This part of the study focused on discussing findings obtained from relevant studies exclusively conducted on online consumer behavior in relation to its determinants of online consumer purchase. This study considered three basic domains such as presenting general results about online consumer behavior, then, discussing and addressing the specific objective presented in the introduction part of chapter one will follow. This objective is to investigate determinants of online consumer behavior. Through this, this study will apparently discuss the center of focus, level of analysis, models/theories employed, target group, and method of analysis, of the selected studies, to draw gaps, which can open up a juncture for future research to be conducted based on the gaps.

To address the research objective, i.e., to investigate determinants of online consumer behavior, 50 studies were considered, which comprised empirical and conceptual studies.

3.1. General Results. In advance, addressing the specific objective, some general issues are presented and discussed in the following sections such as online consumer behavior studies by a list of published journals, nature of industries, sector, country and region (where online consumer behavior studies were conducted), methods of data analysis, research design, theory/model employed, sample source, and also, discusses online consumer behavior studies based on the

Table 1: List of online consumer behavior studies published journals.

Journal name	Number	Percentage
Asia Pacific Journal of Marketing and Logistics (Emerald)	2	4
Cogent business & management	2	4
International Journal of Marketing Studies	2	4
Journal of Business Research (Elsevier)	2	4
Journal of Computer Information Systems	2	4
Journal of Retailing and Consumer Services (Elsevier)	2	4
Journal of Theoretical and Applied Electronic Commerce Research	2	4
Sustainability (MDPI)	2	4
Others	34	68
Total	50	100

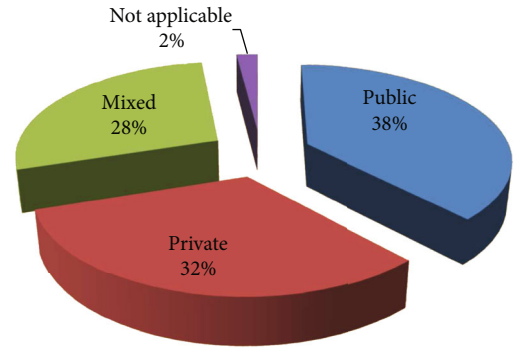
Source: own survey (2022).

center of focus. The following Table 1 presents online consumer behavior studies by a list of publishing journals.

From 50 eligible studies found in 50 articles in 42 journals, the majority of journals had published just one ($N = 34$) or two or more ($N = 8$) articles. Table 1 shows the most prolific journals with at least two published online consumer behavior studies. The most prolific journals are Asia Pacific Journal of Marketing and Logistics (Emerald), Cogent Business and Management, International Journal of Marketing Studies, Journal of Business Research (Elsevier), Journal of Computer Information Systems, Journal of Retailing and Consumer Services (Elsevier), Journal of Theoretical and Applied Electronic Commerce Research, and Sustainability (MDPI) published two articles, respectively. Figure 3 presents online consumer behavior studies by nature of the organization.

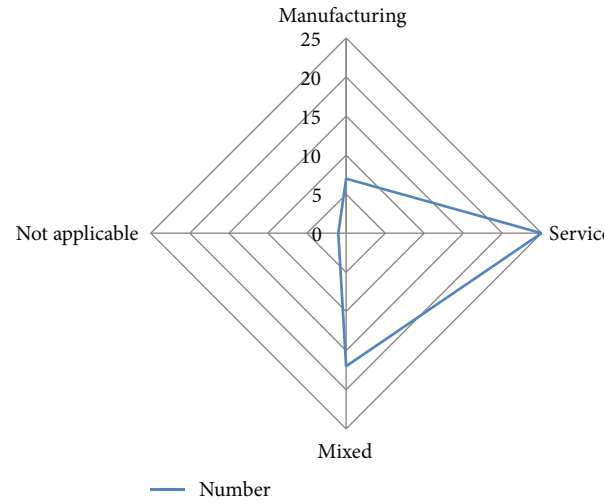
According to Figure 3, almost equivalent share of online consumer behavior studies conducted in public, private, and mixed (i.e., studies conducted using both natures of organizations such as publicly based organizations and private ones together) natures; accordingly, their share out of the total studies are presented as 38% (19), 32% (16), and 28% (14) for public, private, and mixed, and the remaining 2% (1) is not applicable studies, respectively. Therefore, as can be understood from the result above, there are still shortages of studies conducted at the global level by taking into account both natures of organizations (public and private) together in the extant studies, which predominantly emphasized online consumer behavior, while currently almost equal emphasis is being given by researchers and scholars carrying out studies that having either public or private nature in the extant literature. This situation may result in a problem to identify determining factors affecting online consumer behavior that are equally applicable to all organizations. The next section presents online consumer behavior studies by sector.

Figure 4 presented online consumer behavior studies sector-wise; accordingly, a large number of studies 50% (25) were conducted in the service sector, and online consumer behavior studies were done by taking into consider-



Source: *Own Survey* (2022)

Figure 3: Online consumer behavior studies by nature of organization.

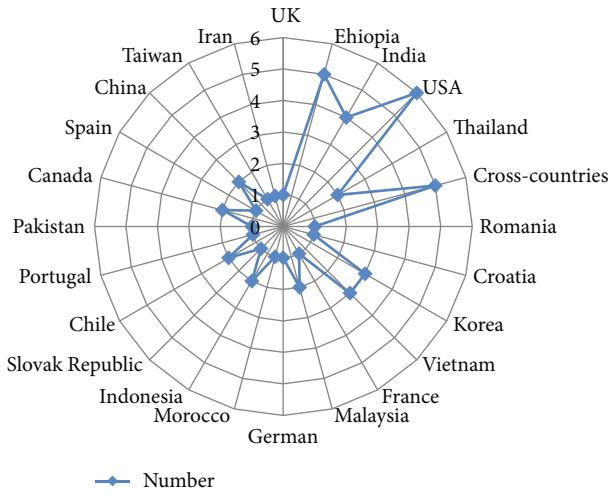


Source: *Own Survey* (2022)

Figure 4: Online consumer behavior studies by sector.

ation both sectors, i.e., service and manufacturing, covering the second-largest number that is 34% (17) and manufacturing 14% (7), and the remaining 2% (1) is not applicable to either of the case. From the studies conducted in the service sector, education takes the leading position of 52% (13) particularly studies focused on tertiary level, i.e., university, and the next place is owned by other services such as bank, finance and insurance, hotel, health, and administration cities. Therefore, the finding indicated that there is a lack of online consumer behavior studies in some sectors like the manufacturing sector, and also the available studies conducted on the sector are only limited to apparel, fashion, pharmaceutical, and wood furniture industries. Similarly, there is also a shortage of online consumer behavior studies on primary and secondary level education. Figure 5 presents online consumer behavior studies by country of origin.

Figure 5 described about online consumer behavior studies by their countries of origin, therefore, the finding revealed that online consumer behavior is a concept with a global reach from all corners. However, there is a



Source: *Own Survey* (2022)

Figure 5: Online consumer behavior studies by country.

concentration of online consumer behavior studies in specific countries, for instance, USA, which have the biggest share in the extant literature. Based on region, North America, Asia, and the Middle East are taking the leading positions in the number of online consumer behavior studies. On the other hand, online consumer behavior studies are less represented in some content, for example, Africa. This can expose a trend that raises questions about the aspirations of generalizable knowledge on online consumer behavior. Therefore, from the finding obtained, African countries are the place where a shortage of online consumer behavior studies is exclusively seen. And also, a number of online consumer behavior studies are insufficiently conducted across countries or by considering two or more countries or conducted at a multinational level, the existing studies. Figure 6 portrays data analysis methods employed by online consumer behavior studies.

As can be understood from Figure 6, regarding data analysis methods used, 58% (29) of the online consumer behavior-focused studies were analyzed using structural equation modeling (SEM), 14% (7) factor analysis (FA), 10% (5) descriptive statistics (such as frequency, mean, median, and standard deviation), 8% (4) mixed (data analysis methods used particularly to qualitative and quantitative data analysis methods, e.g., FDG, interview, SEM, MLRM, and correlation test together), 6% (3) of the studies were analyzed using multiple linear regression model (MLRM), and very limited number of the studies were used in correlation (Pearson's correlation test) and ANOVA tests, which cover 2% (1) and 2% (1), respectively, of the selected studies. Therefore, this shows that almost more than half of the studies focused on online consumer behavior employed inferential statistics. Similarly, 92% of online consumer behavior studies used a cross-sectional research design and were self-reported. Furthermore, a large majority of online consumer behavior studies are surveys which accounts for 84%, and the rest 8% goes for studies conducted using a mixed approach. The following section describes the model/theory employed by online consumer behavior studies.

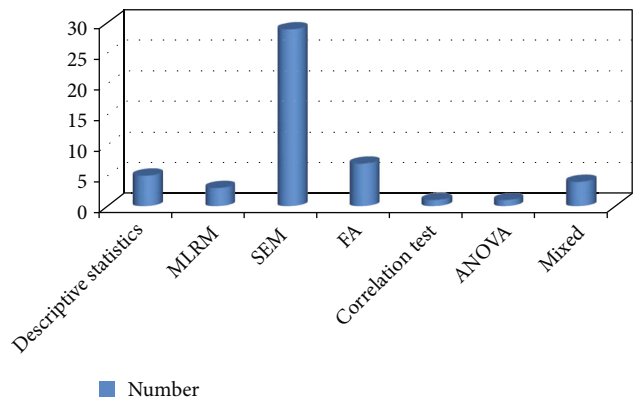


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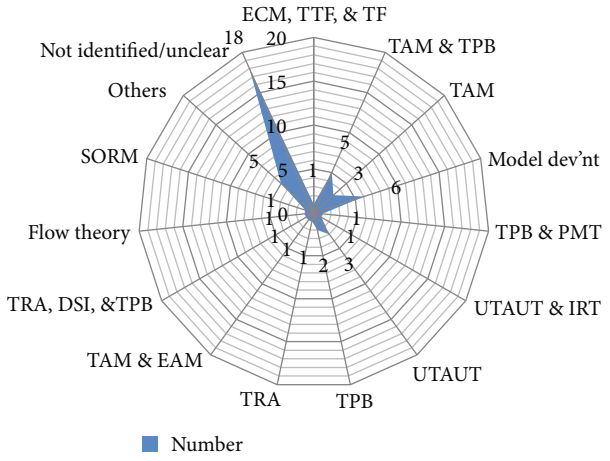
Figure 6: Data analysis methods employed by online consumer behavior studies.



Source: *Own Survey* (2022)

Figure 7: Model/theory employed by online consumer behavior studies.

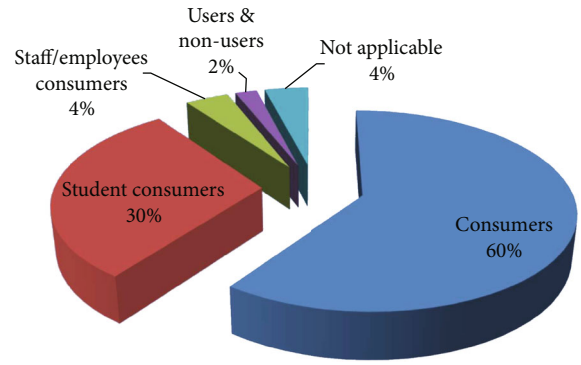
Figure 7 has presented model/theory employed by online consumer behavior studies; accordingly, only 42% of the studies were conducted using clear and conventional model/theory such as expectation-confirmation model (ECM) with task-technology fit (TTF) model and the trust factor (ECM, TTF, and TF) 2% (1), technology acceptance model and the theory of planned behavior 10% (5), technology acceptance model (TAM) 6% (3), the theory of planned behavior (TPB) and the protection motivation theory (PMT) 2% (1), unified theory of acceptance and use of technology (UTAUT) and innovation resistance theory (IRT) 2% (1), unified theory of acceptance and use of technology (UTAU T) 6% (3), theory of planned behavior (TPB) 4% (2), theory of reasoned action (TRA) 2% (1), theory of reasoned action (TRA) and theory of planned behavior (TPB) 2% (1), flow theory 2% (1), and stimulus-organism-response model (SORM) 2% (1); 12% (6) of the studies focused on model development; 2% (1) of the studies categorized under "others" while employed various frameworks for instance, Cattell's sixteen personality factor (16PF), and the remaining

44% (22) were carried out without a model or unclear. Therefore, the majority of the past studies were not used apparent models/theories to investigate online consumer behavior, and there is also a contradiction.

For example, the studies that apparently used technology acceptance model (TAM) and the theory of planned behavior (TPB): Wu and Song [102], Ha et al. [82], Mengistie and Worku [103], and Teka [104]; technology acceptance model (TAM): Karaveg [105], Changchit et al. [106], and Lai and Wang [107]; unified theory of acceptance and use of technology (UTAUT): Mengesha and Garfield [108], Mäntymäkia and Salo [109], and Escobar-Rodríguez and Carvajal-Trujillo [80]; flow theory: Richard et al. [110]; the theory of reasoned action (TRA): Andrews and Bianchi [111]; the theory of reasoned action (TRA) and theory of planned behavior (TPB): Yusmita et al. [112]; the theory of planned behavior (TPB): Lee and Chen [113] and Moon et al. [9]; the theory of reasoned action (TRA), domain specific innovativeness (DSI), and the theory of planned behavior (TPB): Javadi et al. [114]; unified theory of acceptance and use of technology (UTAUT) and innovation resistance theory (IRT): Soh et al. [115]. Figure 8 describes the sample sources used by online consumer behavior studies, in the existing literature.

As can be clearly seen in Figure 8, regarding sample sources employed by online consumer behavior studies, therefore, four basic categories of sample sources are used by the studies such as consumers (in general) 60% (30), student consumers 30% (15), staff/employees consumers 4% (2), and user and nonusers 2% (1), and the rest studies, i.e., 4%(2) are categorized as "not applicable", which conducted in systematic and narrative approaches or while these are review studies. Therefore, the finding revealed that the largest majority of the online consumer studies have "consumers" sample source in general, followed by student consumers in the existing literature. On the contrary, a very insignificant number of studies or only one study considered users and nonusers as a sample source to investigate a company's online consumer behavior. This study is the one which is conducted by Javadi et al. [114], with a research title "An Analysis of Factors Affecting on Online Shopping Behavior of Consumers," using two main groups, i.e., consumers who are purchasing and individuals who do not start purchasing company's products via online. This indicated that there are serious shortages of studies conducted considering users and nonusers type of sample source in extant online consumer behavior studies.

Regarding online consumer behavior studies conducted using consumers in general as a sample source, a considerable number of studies have used consumers with various statuses and groups such as age, income, and education levels. For instance, studies conducted using consumers' age groups: older adults [102, 115], adult individuals [116, 117], young consumers [33, 118]; consumers' income groups: middle and higher income [119]; based on education levels of consumers: highly educated [110, 111]. As can be understood from the findings, the studies are more focused on and used a sample source of adults/young individuals those highly educated. This shows us there is a lack of studies investigating factors affecting older and illiterate consumers' online purchase behavior.



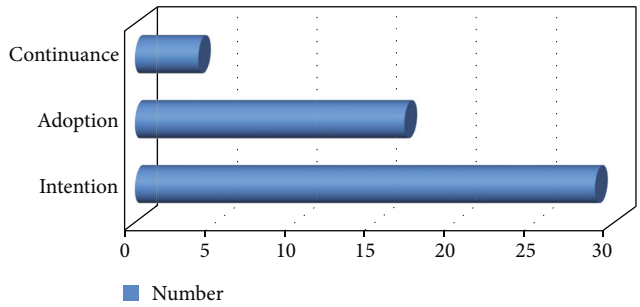
Source: *Own Survey* (2022)

FIGURE 8: Sample source of online consumer behavior studies.

Figure 8 also indicated that not a few studies were conducted using student consumers as a sample source to investigate online consumer behavior, in the existing literature. According to the findings, the studies have used university students studying at undergraduate and graduate levels. To list some of these studies' authors: Lixandroiu et al. [120], Daroch et al. [2], Ozdemir and Naserinia [121], Tran [122], Changchit et al. [106], Lee and Lee [123], Bucko et al. [124], Kim and Ammeter [69], Moody et al. [125], Rahnamaee and Berger [126], Yusmita et al. [112], Mazaheri et al. [127], Richard [128], and Lee and Chen [113]. This study also revealed that primary and secondary level student consumers are the most neglected groups in the existing online consumer behavior studies. The following section presents descriptions regarding the center of focus of online consumer behavior studies, in the extant literature.

Figure 9 presents online consumer purchase stages, thus, as can be understood from the result, the online consumer behavior studies were conducted at intention 58% (29), adoption 34% (17), and continuance 8% (4) stages. As the finding indicated that the majority of the existing online consumer behavior studies were carried out to investigate purchase intentions of consumers, followed by studies focused on adoption, which has taken the second largest numbers, and conversely, a very insignificant number of studies carried out to investigate determinants of online consumers repurchase or continuance behavior. For instance, product and service-providing industries/businesses such as education (e.g. [2, 69, 120–122]), banks (e.g. [103]), fashion (e.g. [129]), city administrations (e.g. [130]), and apparel (e.g. [131]) are more emphasized on online purchase intention, according to the shown researchers.

Some of the studies focused on investigating factors affecting online consumer purchase/adoption as follows: banks (e.g. [104, 132]), apparel (e.g. [105]), wood furniture (e.g. [15]), CyberPharma (e.g. [133]), health (e.g. [108]), education (e.g. [106, 123, 124]), and city administrations (e.g. [134]). In contrast, very few studies were conducted on repurchase/continuance intention of online consumers, in the existing studies, for instance, to list some: retailing business [116, 117] and education (e.g. [126]). Therefore, it



Source: *Own Survey* (2022)

FIGURE 9: Online consumer behavior studies by center of focus.

can be concluded that continuance stage is the most forgotten and underresearched area in online consumer behavior studies in the extant literature.

3.2. Determinants of Online Consumer Behavior Using Cheung and Chan Model. As proposed by Cheung and Chan model, extant studies on the potential determinants of online consumer behavior are separated into five major domain areas: individual/consumer characteristics, environmental influences, product/service characteristics, medium characteristics, and online merchant and intermediary characteristics with major online consumer purchase categories such as intention, adoption, and continuance. In this regard, Table 2 presented determinants of online consumer behavior from purchase intention perspective.

3.2.1. Determinants of Online Consumer Behavior (Intention). As can be seen in Table 2, regarding investigating determinants of online consumer behavior from individual/consumer characteristics, accordingly, various factors were addressed by the existing studies such as trust, attitude, experience, degree of knowledge, degree of participation, perceived risks (function, finance, product, and physical), value, motivation, perceived satisfaction, demographic factors (gender), psychological factors (perceived advantage, perceived information asymmetry, and emotions), perceived enjoyment, and innovativeness are factors that affecting online consumer behavior (e.g. [2, 9, 32, 82, 103, 115, 118, 120–122, 129, 130, 135]). For example, according to Al-Hattami [135], trust has a positive impact on consumers' intention to continue the usage of online shopping. By the same token, the finding of Ha et al. [82] revealed that the shopping intention of online consumers is positively affected by their attitude. Though, there are also consumer characteristic-related factors that do not yet get emphasis in the extant online consumer studies such as consumer lifestyle, flow, and related to demographic factors such as age and income level.

Purchase intention of online consumers is also affected by various environmental factors, as can clearly be understood from Table 2, factors such as vulnerability, cognition of government policy, subjective norm, perceived behavioral control, facilitating conditions, social influence, cultural values, image, and structure (e.g. [9, 82, 83, 103, 109, 115, 118, 121, 129, 130]). For instance, subjective norms significantly affect online shopping behavior [9, 114]. Similarly, the shopping intention of online consumers is significantly affected by their perception of behavioral control [82]. However, there are shortages of online consumer behavior studies investigating environmental factors such as exposure and attention.

From the same table (Table 2), factors affecting relation to product/service characteristics, medium characteristics, and merchants and intermediate characteristics, on online consumer behavior, has presented. Product/service characteristics: product information, product variety, and price are factors obtained emphasis by the existing online consumer behavior studies [2, 69, 80]. For example, according to Daroch et al. [2], product information has a significant impact on consumers buying from online sites. However, there are lack of studies in the extant literature on the factors: product knowledge and type, layout, frequency of purchase, tangibility, and differentiation factors on online consumer purchase intention.

Medium characteristic-related factors that have obtained focus in the online consumer behavior studies are perceived usefulness, confirmation, security, compatibility, perceived ease of use, convenience, and website design (e.g. [2, 32, 33, 82, 103, 115, 119–122, 129, 131, 135]). According to the findings of Mengistie and Worku [103] and Lai and Wang [107], perceived usefulness and perceived ease of use were significant in affecting customer's online purchase intention. Likewise, security practices influence a buyer's perceived risk to purchase gemstones online [136]. On the other hand, navigation, interface, and reliability are factors to those have not yet been investigated in the extant literature.

According to Table 2, with regard to merchants and intermediate characteristics, merchandise, retailer brand, performance expectation, service quality, privacy and security, and time risk are factors that affect online consumer behavior [2, 80, 83, 86, 114, 115, 118, 122, 136]. For example, security and privacy risk are significant factors that prevent consumers from online apparel products shopping in Ethiopia [131]. However, delivery/logistic, after-sale service, and incentive are factors that shortages of studies seriously observed in the existing online consumer behavior literature.

3.2.2. Determinants of Online Consumer Behavior (Adoption). Table 3 presented determinants of online consumer behavior from adoption stage, accordingly, individual characteristic-related factors that affect consumers' online purchases are the following: orientation, awareness, experience, demographic (age, gender, occupation, education, and income), attitude, perceived risk, perceived value, perceived enjoyment, and concentration factors (e.g. [15, 104–106, 134, 137–139]). According to the research findings of Gu et al. [137], the impact of consumer awareness and experience has increased in affecting online consumer buying behavior. Similarly, the findings of the study [134] revealed that online shopping among selected respondents is strongly influenced by the demographic profile of the purchaser which included factors like age, gender, education, occupation, and income. And also, the same result was

Table 2: Determinants of online consumer behavior (intention).

Domain area	Description	Key factors	Studies
Individual/ consumer characteristics	Referring to internal individual factors and behavioral characteristics	(i) Trust (ii) Attitude (iii) Experience (iv) Degree of knowledge (v) Degree of participation (vi) Perceived risks (vii) Value (viii) Motivation (ix) Perceived satisfaction (x) Demographic factors (xi) Psychological factors (xii) Perceived enjoyment (xiii) Innovativeness	Al-Hattami [127]; Lixandroiu et al. [120]; Moon et al. [9]; Ha et al. [82]; Daroch et al. [2]; Mengistie and Worku [103]; Ozdemir and Naserinia [121]; Soh et al. [115]; Koch et al. [129]; Tran [122]; Chetioui et al. [32]; Cruz-Cárdenas et al. [130]; Hashim et al. [118]; Kim and Ammeter [69]; Duarte et al. [33]; Singh et al. [131]; Adnan [119]; Moody et al. [125]; Mäntymäkia and Salo [109]; Escobar-Rodríguez and Carvajal-Trujillo [80]; Andrews and Bianchi [111]; Lai and Wang [107]; Yeh et al. [86]; D'Alessandro et al. [136]; Mazaheri et al. [127]; Javadi et al. [114]; Richard [128]; Richard et al. [110]
Environmental influences	Referring to the structural influences, including market-related issues (uncertainty, competition, and concentration) and national and international issues (legal structure, trade restrictions, and culture)	(i) Vulnerability (ii) Cognition of government policy (iii) Subjective norm (iv) Perceived behavioral control (v) Facilitating conditions (vi) Social influence (vii) Cultural values (viii) Image (ix) Structure	Moon et al. [9]; Ha et al. [82]; Mengistie and Worku [103]; Ozdemir and Naserinia [121]; Soh et al. [115]; Koch et al. [129]; Cruz-Cárdenas et al. [130]; Hashim et al. [118]; Han et al. [83]; Mäntymäkia and Salo [109]; Escobar-Rodríguez and Carvajal-Trujillo [80]; Andrews and Bianchi [111]; Javadi et al. [114]; Richard et al. [110]
Product/service characteristics	Referring to knowledge about the product, product type, frequency of purchase, tangibility, and product quality	(i) Product information (ii) Product variety (iii) Price	Daroch et al. [2]; Kim and Ammeter [69]; Escobar-Rodríguez and Carvajal-Trujillo [80]
Medium characteristics	Referring to both traditional IS attributes (ease of use, quality, security, and reliability) and web-specific factors (navigation, interface, and network speed)	(i) Perceived usefulness (ii) Confirmation (iii) Security (iv) Compatibility (v) Perceived ease of use (vi) Convenience (vii) Website design	Al-Hattami [135]; Lixandroiu et al. [120]; Ha et al. [82]; Daroch et al. [2]; Mengistie and Worku[103]; Ozdemir and Naserinia [121]; Soh et al. [115]; Koch et al. [129]; Tran [122]; Chetioui et al. [32]; Duarte et al. [33]; Singh et al. [131]; Adnan [119]; Mäntymäkia and Salo [109]; Andrews and Bianchi [111]; Lai and Wang [107]; Mazaheri et al. [127]; Javadi et al. [114]; Richard [128]; Richard et al. [110]
Merchants and intermediate characteristics	Referring to the key attributes/features of the online stores	(i) Merchandise (ii) Retailer brand (iii) Performance expectation (iv) Service quality (v) Privacy and security (vi) Time risk	Daroch et al. [2]; Soh et al. [115]; Tran [122]; Han et al. [83]; Escobar-Rodríguez and Carvajal-Trujillo [80]; Yeh et al. [86]; D'Alessandro et al. [136]; Javadi et al. [114]; Hashim et al. [118]

Source: own survey (2022).

Table 3: Determinants of online consumer behavior (adoption).

Domain area	Description	Key factors	Studies
Individual/consumer characteristics	Referring to internal individual factors and behavioral characteristics	(i) Orientation (ii) Awareness (iii) Experience (iv) Demographic factors (v) Attitude (vi) Perceived risk (vii) Perceived value (viii) Perceived enjoyment (ix) Concentration	Huyen et al. [138]; Karaveg [105]; Gu et al. [137]; Barcic et al. [15]; Teka [104]; Changchit et al. [106]; Jindal et al. [134]; Ling and Yazdanifard [139]; Tate [140]; Zhang et al. [141]; Lee and Chen [113]
Environmental influences	Referring to the structural influences, including market-related issues (uncertainty, competition, and concentration) and national and international issues (legal structure, trade restrictions, and culture)	(i) Perceived behavioral control (ii) Subjective norms (iii) Facilitating conditions (iv) Social influence (v) Habit	Teka [104]; Mengesha and Garfield[108]; Bucko et al. [124]; Tate [140]; Zhang et al. [141]; Yusmita et al. [112]
Product/service characteristics	Referring to knowledge about the product, product type, frequency of purchase, tangibility, and product quality	(i) Product involvement (ii) Price (iii) Scarcity (iv) Product details	Karaveg [105]; Bucko et al. [124]
Medium characteristics	Referring to both traditional IS attributes (ease of use, quality, security, and reliability) and web-specific factors (navigation, interface, and network speed)	(i) Feasibility and readiness (ii) Usefulness (iii) Ease of use (iv) Security (v) Constancy (vi) Adaptiveness (vii) Introversion (viii) Compatibility (ix) Web design quality	Singh and Sahu[132]; Karaveg [105]; Gu et al. [137]; Guthrie et al. [133]; Teka [104]; Mengesha and Garfield [108]; Changchit et al. [106]; Lee and Lee [123]; Bucko et al. [124]; Yusmita et al. [112]; Lee and Chen [113]
Merchants and intermediate characteristics	Referring to the key attributes/features of the online stores	(i) Performance expectancy (ii) Effort expectancy (iii) Perceived quality (iv) Time pressure (v) Perceived delivery (vi) Perceived after-sale (vii) Perceived privacy	Karaveg [105]; Mengesha and Garfield[108]; Tate [140]; Zhang et al. [141]; Lee and Chen [113]

Source: own survey (2022).

Table 4: Determinants of online consumer behavior (continuance).

Domain area	Description	Key factors	Studies
Individual/ consumer characteristics	Referring to internal individual factors and behavioral characteristics	(i) Attitudes (ii) Adults' perceptions (iii) Customer satisfaction (iv) Customer trust (v) Perceived value	Wu and Song [102]; Rita et al. [117]; Pham et al. [116]; Rahnamaee and Berger [126]
Environmental influences	Referring to the structural influences, including market-related issues (uncertainty, competition, and concentration) and national and international issues (legal structure, trade restrictions, and culture)	(i) Perceived social isolation (ii) Subjective norms (iii) Perceived behavioral control	Wu and Song [102]
Product/service characteristics	Referring to knowledge about the product, product type, frequency of purchase, tangibility, and product quality	(i) Price	Rahnamaee and Berger [122]
Medium characteristics	Referring to both traditional IS attributes (ease of use, quality, security, and reliability) and web-specific factors (navigation, interface, and network speed)	(i) Perceived usefulness (ii) Perceived ease of use (iii) Website design (iv) Convenience (v) Website security (vi) Website privacy	Wu and Song [102]; Rita et al. [117]; Pham et al. [116]; Rahnamaee and Berger [126]
Merchants and intermediate characteristics	Referring to the key attributes/features of the online stores	(i) Perceived lack of shopping mobility (ii) Service quality (iii) Brand prestige	Wu and Song [102]; Rita et al. [117]; Rahnamaee and Berger [126]

Source: own survey (2022).

obtained regarding perceived risk, and it has a significant effect on online consumer purchases [104]. Nonetheless, individual factors such as lifestyle, motivation, knowledge, innovativeness, involvement, flow, and satisfaction factors and their impact on online consumer purchases have not yet been investigated in the existing studies.

The same table (Table 3) also described environmental and product-related factors affecting online consumer purchase in the extant literature. In this regard, environmental factors that affect online purchase are perceived behavioral control, subjective norms, facilitating conditions, social influence, and habit (e.g. [104, 108, 124, 140]). As Teka [104] revealed that perceived behavioral control as well as subjective norms have a significant positive impact on users' e-banking usage practice in Ethiopia. Exposure, attention, and image are factors that shortages of studies clearly observed in the extant online consumer behavior literature. Besides, product involvement, price, scarcity, and product details are identified as a product characteristic factors that influence online consumer purchase [105, 124]. For instance, the factor of price explained the largest part and is especially important for university students which critically affect their online purchase in the Slovak Republic, according to Bucko et al. [124]. Conversely, product type, layout, frequency of purchase, tangibility, and differentiation are product characteristics factors not yet getting emphasis in the existing online consumer studies on their impact on online consumers.

Feasibility and readiness, usefulness, ease of use, security, constancy, adaptiveness, introversion, compatibility, and web design quality are medium characteristics factors affecting online consumer purchase [104–106, 108, 132, 133, 137], as indicated in Table 3. A study by Karaveg [105] revealed that usefulness and ease of use factors have positively significant influences on consumers online purchasing behavior, especially those who have apparel product experience and who enjoy shopping process, in apparel industry, in Thailand. In this respect, our results support the usefulness of the multiperspective react-cope-adapt framework of constrained consumer behavior in an online environment [133].

Regarding merchants and intermediate characteristic-related factors, Table 3 shows that performance expectancy, effort expectancy, perceived quality risk, time pressure, perceived delivery risk, perceived after-sale risk, and perceived privacy risk are factors affecting online consumer purchase, in the existing literature [105, 108, 113, 140, 141]. According to the findings of Zhang et al. [141], for instance, perceived quality risk, perceived time risk, perceived delivery risk, and perceived after-sale risk affect significantly customers' purchasing behavior in the overall process of B2C in China. Nevertheless, brand reputation and incentive factors are not yet apparently investigated with regard to their impacts by the extant online consumer behavior studies.

3.2.3. Determinants of Online Consumer Behavior (Continuance). Table 4 portrays factors that affect online consumer repurchase/continuance behavior in particular from consumers' characteristics and environmental influence perspectives. Consumer characteristic factors affecting online repurchase behavior of consumers are attitudes, adults' perceptions, customer satisfaction, customer trust, and perceived value (e.g. [116, 117]). For example, according to the study by Pham et al. [116], perceived value significantly influences repurchase intention of online consumers. However, there are significant number of possible factors that have not yet been obtained, especially, focus on the existing online consumer behavior studies, for instance,

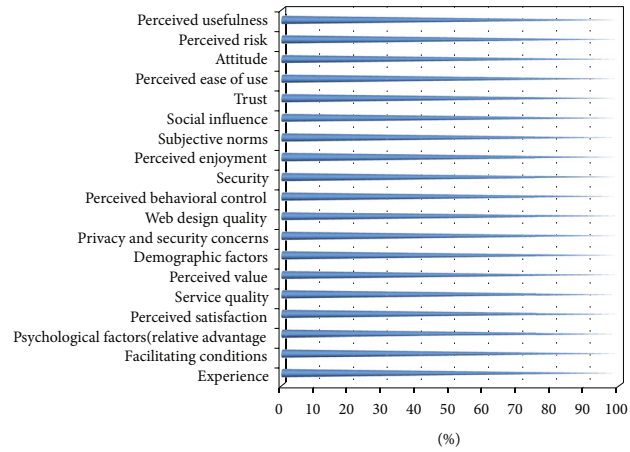
consumer lifestyle, motivation, knowledge, innovativeness, involvement, demographic factors (e.g. gender, occupation, education, and income), flow, and experience factors.

Besides, perceived social isolation, subjective norms, and perceived behavioral control are environmental factors influence online consumers repurchase [102]; and the finding of Wu and Song [102] revealed that these factors significantly impacting consumers' intentions to continue online shopping. In contrast, environmental factors such as exposure, attention, and image are factors not yet received attention from researchers and scholars to investigate their impact on online consumer repurchase. Moreover, price factor is the only factor addressed by the existing studies—its impact on consumers' online repurchases under product/service characteristic-related factors, and as per Rahnamaee and Berger [126] finding indicated that, price has a significant impact on intention to repurchase. In this regard, product/service characteristic factors that are most neglected or not apparently investigated, to list some: product knowledge, product type, layout, frequency of purchase, tangibility, and differentiation factors.

The same table (Table 4) shows factors investigated in relation to medium characteristics and merchants and intermediate characteristics. Medium characteristic factors influencing consumer online continuance/repurchase are perceived usefulness, perceived ease of use, website design, convenience (access, search, evaluation, transaction, and possession/postpurchase), and website security and privacy (e.g. [102, 108]). And as stated by Pham et al. [116], for example, perceived usefulness and perceived ease of use factors are significantly influencing consumers' online continuance. Interface, reliability, and navigation factors are not investigated sufficiently in the extant literature.

Moreover, perceived lack of shopping mobility, customer service quality, and brand prestige are merchants and intermediate characteristics-related factors influencing consumer online continuance (e.g. [117, 126]), and Rita et al. [117] indicated that e-service quality significantly influencing consumers online repurchase intention. However, there is a shortage of studies in relation to privacy and security control, delivery/logistic, after-sale service, and incentive factors in the extant literature. In a general format, very limited studies were conducted on consumers' online repurchase intention in comparison to purchase intention and adoption stages.

3.2.4. The Most Influential Factors of Online Consumer Behavior. According to Figure 10, the most influential factors affecting online consumer behavior in the extant online consumer behavior studies are presented. Accordingly, the top nineteen factors significantly affecting online consumers are identified based on their level of influence on consumers' intention, adoption, and repurchase in the following manner: perceived usefulness, perceived risk, attitude, perceived ease of use, trust, social influence, subjective norms, perceived enjoyment, security, perceived behavioral control, web design quality, privacy and security concerns, demographic factors (e.g., age, gender, occupation, education, and income), perceived value, service quality, perceived satisfaction, psychological factors (e.g., relative advantage), facilitating conditions, and consumers' experience. For example, perceived usefulness and ease of use are factors influencing consumers' internet shopping [142–144].



Source: *Own Survey* (2022)

FIGURE 10: The most influential factors of online consumer behavior.

4. Conclusion and Recommendation

4.1. Conclusion. Based on the findings generated, the following conclusions were drawn. First, existing online consumer behavior studies are addressed based on the nature of the organization and sector-wise. Accordingly, there are shortages of studies conducted considering both public and private organizations and manufacturing sector, even the existing manufacturing-focused studies are only limited to apparel, fashion, pharmaceutical, and wood furniture industries. Similarly, there is also a shortage of online consumer behavior studies on primary and secondary level education. Regarding the reachability of the studies, African countries are the place where a shortage of online consumer behavior studies is exclusively seen. And also, a number of online consumer behavior studies are insufficient regarding studies conducted across countries or by considering two or more countries or conducted at a multinational level in the existing studies.

Second, with regard to research methods employed, there is a lack of studies conducted using a longitudinal design and qualitative and mixed approaches. And also, the existing studies were not used apparent models/theories to investigate online consumer behavior, and there is also a contradiction. The finding indicated that there are serious shortages of studies carried out considering users and nonusers type of sample source in extant online consumer behavior studies. Even consumers selected for the studies were not inclusive of all age groups and education levels, for instance, older and illiterate consumers. Moreover, out of the student consumers' focused studies, none of them considered primary and secondary level student consumers.

Third, as the finding of this study revealed that continuance/repurchase stage is the most forgotten and underresearched area in online consumer behavior studies, in the existing literature, conversely, the high priory is given for investigating purchase intentions of consumers, followed

by studies focused on adoption. There are also shortages of studies on factors such as consumer lifestyle, flow, innovativeness, demographic factors (e.g., age and income), exposure, attention, product type, layout, frequency of purchase, tangibility, differentiation, brand reputation, and incentive in the extant online consumer behavior literature.

Lastly, the study finding has identified the most influential factors of online consumer behavior: perceived usefulness, perceived risk, attitude, perceived ease of use, trust, social influence, subjective norms, perceived enjoyment, security, perceived behavioral control, web design quality, privacy and security concerns, demographic factors (e.g., age, gender, occupation, education, and income), perceived value, service quality, perceived satisfaction, psychological factors (e.g., relative advantage), facilitating conditions, and consumers' experience.

4.2. Recommendation. The following recommendations were drawn as per the conclusions. It is suggested that future researchers and scholars conduct their studies on organizations mixed of public and private natures while there is a shortage of studies in this area, particularly on online consumer behavior, which helps to identify determining factors affecting online consumer behavior that are equally applicable to all organizations. Also, future studies recommended basing their focus on manufacturing and service (particularly at primary and secondary level education) sectors, as these areas are not yet sufficiently researched. In addition to this, regarding the reachability of online consumer behavior studies, there is a shortage of studies, especially in African countries, therefore, future research advised to give emphasis to these countries to investigate factors affecting consumers' online purchase specific to Africa, as well as investigating and experiencing across countries within the continent.

Methodologically, extant online consumer behavior studies were conducted more in quantitative approach and cross-sectional design, which is primarily using structural equation modeling (SEM) analysis method. However, according to Picincu [145], a qualitative research approach can provide better insights into the underlying reasons and motivations of online customers' behaviors than the quantitative approach via using focus groups and interviews. Thus, future research is recommended to be carried out with more of a qualitative approach with a longitudinal design. Likewise, as clearly shown in the finding, the existing studies used consumers in general without having groups as a sample source such as based on consumers' online purchase experience and demographic characteristics like age, gender, education, and income level of consumers. For instance, as Jiang et al. [146] revealed younger consumers may more likely to purchase online than older consumers. Therefore, future researchers and scholars are advised to use different groups of consumers such as user and nonusers groups and also based on demographic characteristics (e.g., age, gender, education, and income level) of consumers to generate very convincing findings regarding determinants of online consumer behavior.

Regarding the center of focus of the studies, the finding indicated that a large majority of the studies were conducted at purchase intention and adoption stages, conversely, a shortage of study observed at continuance stage, therefore, scholars and researchers suggested conducting their future studies on repurchase intention of online consumers. In addition, it is advised future studies focus on the impacts of consumer lifestyle, flow, innovativeness, demographic factors (e.g., age and income), exposure, attention, product type, layout, frequency of purchase, tangibility, differentiation, brand reputation, and incentive factors on consumers' online purchase.

Moreover, this study has identified the most influencing factors of online consumer behavior which are perceived usefulness, perceived risk, attitude, perceived ease of use, trust, social influence, subjective norms, perceived enjoyment, security, perceived behavioral control, web design quality, privacy and security concerns, demographic factors (e.g., age, gender, occupation, education, and income), perceived value, service quality, perceived satisfaction, psychological factors (e.g., relative advantage), facilitating conditions, and consumers' experience. In this regards, industries require developing a clear plan to work on information communication technology to join or sustain in the online business in this hyperdynamic digitalized world, to cope these factors. And also, generate loyal consumers by providing trusted, secure, and convenient online services to consumers, which enhance industries to be competent in the online business world. Therefore, those industries shopping online or the newcomers advised working on the above-identified factors to build loyal consumers for their products or services.

Data Availability

The data used to support the findings of this study are included within the article.

Additional Points

Contribution and Practical Implication of the Study. In a general format, per the findings obtained from this study, the study has a very fruitful contributions and practical implications for researchers and scholars, industry owners or managers, and countries' governments. *Researchers and Scholars*. (i) The study has a concrete contribution for scholars and researchers who have an interest to investigate factors affecting online consumer behavior, in particular focusing on potential factors that are not yet obtained sufficient emphasis by the existing studies to investigate online consumer behavior in a comprehensive manner such as consumer lifestyle, flow, innovativeness, demographic factors (e.g., age and income), exposure, attention, product type, layout, frequency of purchase, tangibility, differentiation, brand reputation, and incentive factors, employing longitudinal design and qualitative and mixed research approaches. In addition, they can also conduct their studies on determinants of online consumer repurchase intention, which is highly overlooked in the existing online consumer behavior studies. *Industry Owners/Managers*. (ii) The study findings have vivid contributions for owners/managers of industries by identifying the most influential factors currently affecting online consumer purchase behavior in a global context: perceived usefulness, perceived risk, attitude, perceived ease of use, trust, social influence, subjective norms, perceived

enjoyment, security, perceived behavioral control, web design quality, privacy and security concerns, demographic factors (e.g., age, gender, occupation, education, and income), perceived value, service quality, perceived satisfaction, psychological factors (e.g., relative advantage), facilitating conditions, and consumers' experience. While such factors either become the impeding or enhancing of consumers' demand for online purchase of products or services of the industries, which directly affect consumers' online purchasing decisions. For example, consumers' trusts have on online purchase determine their purchase decision to purchase or not purchase the products or services. In this regard, industry owners/managers start from awareness creation to convincing the value as well as the associated risks of their business web design, and how the product and service quality will be kept while making the ordered products and services reachable to the consumers should be well communicated with consumers. These require industry owners/managers to have a clear plan to work on information communication technology to join or sustain in the online business in this hyperdynamic digitalized world. And also, generate loyal consumers by providing trusted, secure, and convenient online services to consumers, which enhance industries to be competent in the online business world. Therefore, industries are expected to be ready in advance to work on the identified factors for the betterment of their online businesses. *Countries' Governments*. (iii) The findings of this study have addressed issues that give lessons for countries' governments for instance regarding the situation that currently how online businesses are operating by showing the impacting factors in general, and also the required action expected from the government of the respective country particularly, these days, majority of the factors that the online businesses are encountering predominantly linked with information technology infrastructure, therefore, the study informs countries' governments to working on improving information technology infrastructure to enhance the online businesses. *Limitation and Future Research Directions*. This review study importantly has added value by investigating determinants of online consumer behavior using online consumer behavior extant literature. Though, the study also has some shortcomings: a limited number of databases and journals were used, and also the number of articles considered in this study is somehow limited compared to the available published articles on online consumer behavior, which might limit the generalizability of the findings obtained. In this regard, future researchers and scholars suggested using extended databases and journals, and also including more articles in their studies, which can help them to generate very comprehensive and more value-adding findings on the determinants of online consumer behavior in the digital world. In addition, future researchers and scholars can also extend this study by investigating the mediators and/or moderators of online consumer behavior, and also its outcomes.

Conflicts of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

[1] C. Strzelecka, "Time paradoxes of neoliberalism: how time management applications change the way we live," *Time & Society*, vol. 31, no. 2, pp. 270–290, 2022.

[2] B. Daroch, G. Nagrath, and A. Gupta, "A study on factors limiting online shopping behaviour of consumers," *Rajagiri Management Journal*, vol. 15, no. 1, pp. 39–52, 2021.

[3] B. Verplanken and D. Roy, "*Consumer Habits and Sustainable Consumption*," in *Handbook of research on sustainable consumption*, pp. 243–253, Edward Elgar Publishing, 2015.

[4] W. Young, K. Hwang, S. McDonald, and C. J. Oates, "Sustainable consumption: green consumer behaviour when purchasing products," *Sustainable Development*, vol. 18, no. 1, pp. 20–31, 2010.

[5] V. Chauhan and M. H. Shah, "An empirical analysis into sentiments, media consumption habits, and consumer behaviour during the coronavirus (COVID-19) outbreak," *Purakala with ISSN*, vol. 971, p. 2143, 2020.

[6] R. R. Dholakia, *Technology and Consumption: Understanding Consumer Choices and Behaviors*, Springer Science & Business Media, 2012.

[7] L. Zhao, Z. Yang, and W. J. Lee, "The impact of time-of-use (TOU) rate structure on consumption patterns of the residential customers," *IEEE Transactions on Industry Applications*, vol. 53, no. 6, pp. 5130–5138, 2017.

[8] T. Harris, "Trading places: new economic geographies across Himalayan borderlands," *Political Geography*, vol. 35, pp. 60–68, 2013.

[9] J. Moon, Y. Choe, and H. Song, "Determinants of consumers' online/offline shopping behaviours during the COVID-19 pandemic," *International Journal of Environmental Research and Public Health*, vol. 18, no. 4, p. 1593, 2021.

[10] K. Hameli, "A literature review of retailing sector and business retailing types," *ILIRIA International Review*, vol. 8, no. 1, pp. 67–87, 2018.

[11] P. Jones, D. Hillier, and D. Comfort, "Shopping for tomorrow: promoting sustainable consumption within food stores," *British Food Journal*, vol. 113, no. 7, pp. 935–948, 2011.

[12] L. Dumitrescu, G. Orzan, and M. Fuciu, "Understanding the online consumer behaviour and the usage of the internet as a business environment–a marketing research," *Revista Economică*, vol. 67, no. 3, pp. 63–79, 2015.

[13] S. Monaco, "Tourism and the new generations: emerging trends and social implications in Italy," *Journal of tourism Futures*, vol. 4, no. 1, pp. 7–15, 2018.

[14] V. Sima, I. G. Gheorghe, J. Subić, and D. Nancu, "Influences of the industry 4.0 revolution on the human capital development and consumer behavior: a systematic review," *Sustainability*, vol. 12, no. 10, p. 4035, 2020.

[15] P. A. Barcic, M. Kitek Kuzman, T. Vergot, and P. Grošelj, "Monitoring consumer purchasing behavior for wood furniture before and during the COVID-19 pandemic," *Forests*, vol. 12, no. 7, p. 873, 2021.

[16] S. Khojasteh-Khosro, A. Shalbafan, and H. Thoemen, "Consumer behavior assessment regarding lightweight furniture as an environmentally-friendly product," *Wood Material Science & Engineering*, vol. 17, no. 3, pp. 192–201, 2022.

[17] P. Kotler, "Reconceptualizing marketing: an interview with Philip Kotler," *European Management Journal*, vol. 12, no. 4, pp. 353–361, 1994.

[18] J. Jacoby, "A brand loyalty concept: comments on a comment," *Journal of Marketing Research*, vol. 12, no. 4, pp. 484–487, 1975.

[19] N. Mtimet and L. M. Albisu, "*Spanish wine consumer behavior: a choice experiment approach*," *International Journal*, vol. 22, no. 3, pp. 343–362, 2006.

[20] Schiffman & Kanuk, *Consumer Behavior*, Prentice Hall, New Jersey, 9th edition, 2007.

[21] American Marketing Association, 2022.

[22] I. F. Asiegbu, D. M. Powei, and C. H. Iruka, "Consumer attitude: some reflections on its concept, trilogy, relationship with consumer behavior, and marketing implications," *European Journal of Business and Management*, vol. 4, no. 13, pp. 38–50, 2012.

[23] E. Maslowska, E. C. Malthouse, and T. Collinger, "The customer engagement ecosystem," *Journal of Marketing Management*, vol. 32, no. 5-6, pp. 469–501, 2016.

[24] T. Powers, D. Advincula, M. S. Austin, S. Graiko, and J. Snyder, "Digital and social media in the purchase decision Process," *Journal of Advertising Research*, vol. 52, no. 4, pp. 479–489, 2012.

[25] G. P. Moschis, "Consumer behavior in later life: current knowledge, issues, and new directions for research," *Psychology & Marketing*, vol. 29, no. 2, pp. 57–75, 2012.

[26] J. P. Peter and J. Olson, *Ebook: Consumer Behavior*, McGraw Hill, 2010.

[27] M. Hirsch, S. Aggarwal, C. Barker, C. J. Davis, and J. M. Duffy, "Googling endometriosis: a systematic review of information available on the internet," *American Journal of Obstetrics and Gynecology*, vol. 216, no. 5, pp. 451–458.e1, 2017.

[28] K. M. Makhitha and K. Ngobeni, "The influence of demographic factors on perceived risks affecting attitude towards online shopping," *South African Journal of Information Management*, vol. 23, no. 1, pp. 1–9, 2021.

[29] H. Yang, S. Kumara, S. T. Bukkapatnam, and F. Tsung, "The internet of things for smart manufacturing: a review," *IISE Transactions*, vol. 51, no. 11, pp. 1190–1216, 2019.

[30] A. C. Tankovic and D. Benazic, "The perception of e-servicescape and its influence on perceived e-shopping value and customer loyalty," *Online Information Review*, vol. 42, no. 7, pp. 1124–1145, 2018.

[31] J. G. Martins, S. E. Camargo, T. T. Bishop, K. C. Popat, M. J. Kipper, and A. F. Martins, "Pectin-chitosan membrane scaffold imparts controlled stem cell adhesion and proliferation," *Carbohydrate Polymers*, vol. 197, pp. 47–56, 2018.

[32] Y. Chetioui, H. Lebdaoui, and H. Chetioui, "Factors influencing consumer attitudes toward online shopping: the mediating effect of trust," *EuroMed Journal of Business*, vol. 16, 2020.

[33] P. Duarte, S. C. Silva, and M. B. Ferreira, "How convenient is it? Delivering online shopping convenience to enhance customer satisfaction and encourage e-WOM," *Journal of Retailing and Consumer Services*, vol. 44, pp. 161–169, 2018.

[34] A. Gidey, *Factors Affecting Online Repurchase Intention: Case Study of Ethiopian Airlines*, Doctoral dissertation, St. Mary's University, 2017.

[35] C. Katawetawaraks and C. Wang, "Online shopper behavior: influences of online shopping decision," *Asian journal of business research*, vol. 1, no. 2, 2011.

[36] S. Ozturk and A. Okumuş, "The birth of omni-channel marketing and new dynamics of consumers' approach to retail channels," in *Marketing Management in Turkey*, pp. 247–272, Emerald Publishing Limited, 2018.

[37] A. Belhadi, S. Kamble, C. J. C. Jabbour, A. Gunasekaran, N. O. Ndubisi, and M. Venkatesh, "Manufacturing and service supply chain resilience to the COVID-19 outbreak: lessons learned from the automobile and airline industries," *Technological Forecasting and Social Change*, vol. 163, article 120447, 2021.

[38] P. S. Leeflang, P. C. Verhoef, P. Dahlström, and T. Freundt, "Challenges and solutions for marketing in a digital era," *European Management Journal*, vol. 32, no. 1, pp. 1–12, 2014.

[39] J. F. Leu and R. Masri, "Omni-channel retailing and digital business: a case study in Malaysia," *The Journal of Asian Finance, Economics and Business*, vol. 8, no. 4, pp. 403–412, 2021.

[40] D. J. Faulds, W. G. Mangold, P. S. Raju, and S. Valsalan, "The mobile shopping revolution: redefining the consumer decision process," *Business Horizons*, vol. 61, no. 2, pp. 323–338, 2018.

[41] M. Hanninen, L. Mitronen, and S. K. Kwan, "Multi-sided marketplaces and the transformation of retail: a service systems perspective," *Journal of Retailing and Consumer Services*, vol. 49, pp. 380–388, 2019.

[42] O. Petit, C. Velasco, and C. Spence, "Digital sensory marketing: integrating new technologies into multisensory online experience," *Journal of Interactive Marketing*, vol. 45, pp. 42–61, 2019.

[43] Y. Xu and T. Koivumaki, "Digital business model effectuation: an agile approach," *Computers in Human Behaviour*, vol. 95, pp. 307–314, 2019.

[44] T. Marceda Bach, W. V. da Silva, A. Mendonça Souza, C. Kudlawicz-Franco, and C. P. da Veiga, "Online customer behavior: perceptions regarding the types of risks incurred through online purchases," *Palgrave Communications*, vol. 6, no. 1, pp. 1–12, 2020.

[45] A. Rossolov, Y. Aloshynskyi, and O. Lobashov, "How COVID-19 has influenced the purchase patterns of young adults in developed and developing economies: factor analysis of shopping behavior roots," *Sustainability*, vol. 14, no. 2, p. 941, 2022.

[46] R. Shanthi and K. Desti, "Consumers' perception on online shopping," *Journal of Marketing and Consumer Research*, vol. 13, pp. 14–21, 2015.

[47] E. Pantano, G. Pizzi, D. Scarpi, and C. Dennis, "Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak," *Journal of Business Research*, vol. 116, pp. 209–213, 2020.

[48] M. A. Rahman, M. A. Islam, B. H. Esha, N. Sultana, and S. Chakravorty, "Consumer buying behavior towards online shopping: an empirical study on Dhaka City, Bangladesh," *Bangladesh. Cogent Business & Management*, vol. 5, no. 1, article 1514940, 2018.

[49] J. Shaikh, "E-commerce business models in Ethiopian market: challenges and scope," *Information Technology In Industry*, vol. 9, no. 3, pp. 17–25, 2021.

[50] UNCTAD, "Global survey on internet security and trust," 2018, https://unctad.org.

[51] A. Bilgihan, J. Kandampully, and T. C. Zhang, "Towards a unified customer experience in online shopping environments," *International Journal of Quality and Service Sciences*, vol. 8, no. 1, pp. 102–119, 2016.

[52] B. T. Khoa, "Electronic loyalty in the relationship between consumer habits, Groupon website reputation, and online

trust: a case of the Groupon transaction," *Journal of Theoretical and Applied Information Technology*, vol. 98, no. 24, pp. 3947–3960, 2020.

[53] H. G. Pereira, M. de Fátima Salgueiro, and P. Rita, "Online determinants of e-customer satisfaction: application to website purchases in tourism," *Service Business*, vol. 11, no. 2, pp. 375–403, 2017.

[54] S. Elhoushy and P. Lanzini, "Factors affecting sustainable consumer behavior in the MENA region: a systematic review," *Journal of International Consumer Marketing*, vol. 33, no. 3, pp. 256–279, 2021.

[55] A. Reed II, M. R. Forehand, S. Puntoni, and L. Warlop, "Identity-based consumer behavior," *International Journal of Research in Marketing*, vol. 29, no. 4, pp. 310–321, 2012.

[56] C. Tanrikulu, "Theory of consumption values in consumer behaviour research: a review and future research agenda," *International Journal of Consumer Studies*, vol. 45, no. 6, pp. 1176–1197, 2021.

[57] J. Z. Zhang and C. W. Chang, "Consumer dynamics: theories, methods, and emerging directions," *Journal of the Academy of Marketing Science*, vol. 49, no. 1, pp. 166–196, 2021.

[58] W. S. E. Lam and D. S. Warriner, "Transnationalism and literacy: investigating the mobility of people, languages, texts, and practices in contexts of migration," *Reading Research Quarterly*, vol. 47, no. 2, pp. 191–215, 2012.

[59] R. M. Perloff, "Social media effects on young women's body image concerns: theoretical perspectives and an agenda for research," *Sex Roles*, vol. 71, no. 11-12, pp. 363–377, 2014.

[60] M. Boulet, A. C. Hoek, and R. Raven, "Towards a multi-level framework of household food waste and consumer behaviour: Untangling spaghetti soup," *Appetite*, vol. 156, article 104856, 2021.

[61] M. Fishbein and I. Ajzen, "Theory of reasoned action," *The International Encyclopedia of Communication*, vol. 4, pp. 1–4, 1975.

[62] F. D. Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS Quarterly*, vol. 13, no. 3, pp. 319–340, 1989.

[63] I. Ajzen, "The theory of planned behavior," *Organizational Behavior and Human Decision Processes*, vol. 50, no. 2, pp. 179–211, 1991.

[64] E. M. Rogers, *Diffusion of Innovations*, The Free Press, New York, 3rd edition, 1983.

[65] E. M. Rogers, *Diffusion of Innovations*, The Free Press, New York, 4th edition, 1995.

[66] M. Csikszentmihalyi and I. Csikszentmihalyi, *Optimal Experience: Psychological Studies of Flow in Consciousness*, Cambridge University Press, Cambridge, 1988.

[67] C. M. Chiu, E. T. Wang, Y. H. Fang, and H. Y. Huang, "Understanding customers' repeat purchase intentions in B2C e-commerce: the roles of utilitarian value, hedonic value and perceived risk," *Information Systems Journal*, vol. 24, no. 1, pp. 85–114, 2014.

[68] V. Kumar and O. G. Ayodeji, "E-retail factors for customer activation and retention: an empirical study from Indian e-commerce customers," *Journal of Retailing and Consumer Services*, vol. 59, article 102399, 2021.

[69] D. Kim and A. P. Ammeter, "Shifts in online consumer behavior: a preliminary investigation of the net generation," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 13, no. 1, pp. 1–25, 2018.

[70] A. K. Singh and M. Sailo, "Consumer behavior in online shopping: a study of Aizawl," *International Journal of Business & Management Research*, vol. 1, no. 3, pp. 45–49, 2013.

[71] C. H. Lee and J. J. Wu, *Consumer Online Flow Experience: The Relationship between Utilitarian and Hedonic Value, Satisfaction and Unplanned Purchase*, vol. 117, no. 10, 2017Industrial Management & Data Systems, 2017.

[72] S. Cummins, J. W. Peltier, J. A. Schibrowsky, and A. Nill, "Consumer behavior in the online context," *Journal of Research in Interactive Marketing*, vol. 8, no. 3, pp. 169–202, 2014.

[73] W. K. Darley, C. Blankson, and D. J. Luethge, "Toward an integrated framework for online consumer behavior and decision making process: a review," *Psychology & Marketing*, vol. 27, no. 2, pp. 94–116, 2010.

[74] N. Farhana, T. Khan, and S. Noor, "Factors affecting the attitude towards online shopping: an empirical study on urban youth in Bangladesh," *Australian Academy of Business and Economics Review*, vol. 3, no. 4, pp. 224–234, 2017.

[75] L. M. Hong, W. F. W. Zulkiffli, and N. H. Hamsani, "The impact of perceived risks towards customer attitude in online shopping," *International Journal*, vol. 1, no. 2, pp. 13–21, 2016.

[76] K. M. Makhitha, L. Van Scheers, and C. Mogashoa, "Which consumer attributes influence South African consumers to shop online," *Journal of Business and Retail Management Research*, vol. 13, no. 4, 2019.

[77] O. F. Orubu, "The impact of perceived risk on willingness to buy in online markets," *E3 Journal of Business Management and Economics*, vol. 7, no. 1, pp. 013–018, 2016.

[78] U. Tandon, R. Kiran, and A. N. Sah, "The influence of website functionality, drivers and perceived risk on customer satisfaction in online shopping: an emerging economy case," *Information Systems and e-Business Management*, vol. 16, no. 1, pp. 57–91, 2018.

[79] A. Bhatti, S. Saad, and S. M. Gbadebo, "Convenience risk, product risk, and perceived risk influence on online shopping: Moderating effect of attitude," *International Journal of Business Management*, vol. 3, no. 2, pp. 1–11, 2018.

[80] T. Escobar-Rodríguez and E. Carvajal-Trujillo, "Online drivers of consumer purchase of website airline tickets," *Journal of Air Transport Management*, vol. 32, pp. 58–64, 2013.

[81] G. A. Farah, M. Ahmad, H. Muqarrab, J. A. Turi, and S. Bashir, "Online shopping behavior among university students: case study of MUST University," *Advances in Social Sciences Research Journal*, vol. 5, no. 4, pp. 228–242, 2018.

[82] N. T. Ha, T. L. H. Nguyen, T. V. Pham, and T. H. T. Nguyen, "Factors influencing online shopping intention: an empirical study in Vietnam," *The Journal of Asian Finance, Economics and Business*, vol. 8, no. 3, pp. 1257–1266, 2021.

[83] B. Han, M. Kim, and J. Lee, "Exploring consumer attitudes and purchasing intentions of cross-border online shopping in Korea," *Journal of Korea Trade*, vol. 22, no. 2, pp. 86–104, 2018.

[84] S. Islam, "Factors influencing customer's intention to adopt online shopping: a holistic approach," *International Journal of Business and Technopreneurship*, vol. 9, no. 1, pp. 57–66, 2019.

[85] C. C. Lin, H. Y. Wu, and Y. F. Chang, "The critical factors impact on online customer satisfaction," *Procedia Computer Science*, vol. 3, pp. 276–281, 2011.

[86] J. C. Yeh, K. L. Hsiao, and W. N. Yang, *A Study of Purchasing Behavior in Taiwan's Online Auction Websites: Effects of Uncertainty and Gender Differences*, vol. 22, no. 1, 2012Internet Research, 2012.

[87] M. Morren and A. Grinstein, "Explaining environmental behavior across borders: a meta-analysis," *Journal of Environmental Psychology*, vol. 47, pp. 91–106, 2016.

[88] A. Gupta and N. Arora, "Understanding determinants and barriers of mobile shopping adoption using behavioral reasoning theory," *Journal of Retailing and Consumer Services*, vol. 36, pp. 1–7, 2017.

[89] A. Khare and S. Sarkar, "Use of mobile apps in online shopping: scale development and validation," *International Journal of Indian Culture and Business Management*, vol. 20, no. 1, pp. 74–92, 2020.

[90] V. Misra and A. Vashisht, "Consumer behaviour and online shopping: the study of online shopping adoption (with reference to Lucknow City)," *International Journal of Public Sector Performance Management*, vol. 5, no. 3-4, pp. 321–336, 2019.

[91] P. Tak and S. Panwar, "Using UTAUT 2 model to predict mobile app based shopping: evidences from India," *Journal of Indian Business Research*, vol. 9, no. 3, pp. 248–264, 2017.

[92] M. C. Bolen and Ü. Ozen, "Understanding the factors affecting consumers' continuance intention in mobile shopping: the case of private shopping clubs," *International Journal of Mobile Communications*, vol. 18, no. 1, pp. 101–129, 2020.

[93] P. K. Chopdar and V. J. Sivakumar, "Understanding continuance usage of mobile shopping applications in India: the role of espoused cultural values and perceived risk," *Behaviour & Information Technology*, vol. 38, no. 1, pp. 42–64, 2019.

[94] N. Mohamed, R. Hussein, N. H. A. Zamzuri, and H. Haghshenas, "Insights into individual's online shopping continuance intention," *Industrial Management & Data Systems*, vol. 114, no. 9, pp. 1453–1476, 2014.

[95] D. Shang and W. Wu, "Understanding mobile shopping consumers' continuance intention," *Industrial Management & Data Systems*, vol. 117, no. 1, pp. 213–227, 2017.

[96] C. Okoli and K. Schabram, *A Guide to Conducting a Systematic Literature Review of Information Systems Research*, SSRN Electronic Journal, 2010.

[97] J. Randolph, "A guide to writing the dissertation literature review," *Practical assessment, research, and evaluation*, vol. 14, no. 1, p. 13, 2009.

[98] T. Meline, "Selecting studies for systemic review: inclusion and exclusion criteria," *Contemporary issues in communication science and disorders*, vol. 33, no. Spring, pp. 21–27, 2006.

[99] S. Kitsiou, G. Pare, and M. Jaana, "Systematic reviews and meta-analyses of home telemonitoring interventions for patients with chronic diseases: a critical assessment of their methodological quality," *Journal of Medical Internet Research*, vol. 15, no. 7, article e2770, 2013.

[100] S. Elo, M. Kaarianinen, O. Kanste, R. Polkki, K. Utriainen, and H. Kyngas, "Qualitative content analysis," *SAGE Open*, vol. 4, no. 1, article 215824401452263, p. 10, 2014.

[101] D. Riff, S. Lacy, and F. Fico, *Analyzing Media Messages: Using Quantitative Content Analysis in Research*, Routledge, 2014.

[102] J. Wu and S. Song, "Older adults' online shopping continuance intentions: Applying the technology acceptance model and the theory of planned behavior," *International Journal of Human–Computer Interaction*, vol. 37, no. 10, pp. 938–948, 2021.

[103] H. S. Mengistie and A. Worku, *Measuring Customer's Attitude towards Internet Banking Adoption in Ethiopia*, 2020.

[104] B. M. Teka, "Factors affecting bank customers usage of electronic banking in Ethiopia: application of structural equation modeling (SEM)," *Cogent Economics & Finance*, vol. 8, no. 1, p. 1762285, 2020.

[105] C. Karaveg, "Technology acceptance affecting purchasing behavior among online apparel consumers," *Interdisciplinary Research Review*, vol. 16, no. 4, pp. 16–23, 2021.

[106] C. Changchit, R. Cutshall, R. Lonkani, K. Pholwan, and R. Pongwiritthon, "Determinants of online shopping influencing Thai consumer's buying choices," *Journal of Internet Commerce*, vol. 18, no. 1, pp. 1–23, 2019.

[107] E. Lai and Z. Wang, "An empirical research on factors affecting customer purchasing behavior tendency during online shopping," in *2012 IEEE International Conference on Computer Science and Automation Engineering*, pp. 583–586, IEEE, 2012.

[108] G. H. Mengesha and M. J. Garfield, "A contextualized IT adoption and use model for telemedicine in Ethiopia," *Information Technology for Development*, vol. 25, no. 2, pp. 184–203, 2019.

[109] M. Mäntymäki and J. Salo, "Purchasing behavior in social virtual worlds: an examination of Habbo hotel," *International Journal of Information Management*, vol. 33, no. 2, pp. 282–290, 2013.

[110] M. O. Richard, J. C. Chebat, Z. Yang, and S. Putrevu, "A proposed model of online consumer behavior: assessing the role of gender," *Journal of Business Research*, vol. 63, no. 9-10, pp. 926–934, 2010.

[111] L. Andrews and C. Bianchi, "Consumer internet purchasing behavior in Chile," *Journal of Business Research*, vol. 66, no. 10, pp. 1791–1799, 2013.

[112] F. Yusmita, N. Kamariah, M. Muhammad, Y. Yusoff, and S. Behjati, "Determinants of online purchasing behavior in Nanggroe Aceh *Darussalam*," *Journal of Economics*, vol. 2, no. 4, pp. 153–157, 2012.

[113] S. M. Lee and L. Chen, "Role of Leadership Competencies and Team Social Capital in it Services," *Journal of Computer Information Systems*, vol. 53, no. 4, pp. 1–11, 2013.

[114] M. H. M. Javadi, H. R. Dolatabadi, M. Nourbakhsh, A. Poursaeedi, and A. R. Asadollahi, "An analysis of factors affecting on online shopping behavior of consumers," *International journal of marketing studies*, vol. 4, no. 5, p. 81, 2012.

[115] P. Y. Soh, H. B. Heng, G. Selvachandran et al., "Perception, acceptance and willingness of older adults in Malaysia towards online shopping: a study using the UTAUT and IRT models," *Journal of Ambient Intelligence and Humanized Computing*, pp. 1–13, 2020.

[116] Q. T. Pham, X. P. Tran, S. Misra, R. Maskeliūnas, and R. Damaševičius, "Relationship between convenience, perceived value, and repurchase intention in online shopping in Vietnam," *Sustainability*, vol. 10, no. 2, p. 156, 2018.

[117] P. Rita, T. Oliveira, and A. Farisa, "The impact of e-service quality and customer satisfaction on customer behavior in online shopping," *Heliyon*, vol. 5, no. 10, article e02690, 2019.

[118] N. A. A. N. Hashim, S. I. F. Ramlee, A. M. Yusoff et al., "Internet shopping: how the consumer purchase behaviour is

impacted by risk perception," *TEST Engineering & Management*, vol. 59, no. 6S, pp. 1014–1021, 2019.

[119] H. Adnan, "An analysis of the factors affecting online purchasing behavior of Pakistani consumers," *International Journal of Marketing Studies*, vol. 6, no. 5, p. 133, 2014.

[120] R. Lixăndroiu, A. M. Cazan, and C. I. Maican, "An analysis of the impact of personality traits towards augmented reality in online shopping," *Symmetry*, vol. 13, no. 3, p. 416, 2021.

[121] A. Ozdemir and M. Naserinia, "Investigating consumer behavior in online shopping among university students in two countries," *Research Journal of Business and Management*, vol. 7, no. 1, pp. 23–33, 2020.

[122] V. D. Tran, "The relationship among product risk, perceived satisfaction and purchase intentions for online shopping," *The Journal of Asian Finance, Economics and Business*, vol. 7, no. 6, pp. 221–231, 2020.

[123] J. Lee and Y. Lee, "Does online shopping make consumers feel better? Exploring online retail therapy effects on consumers' attitudes towards online shopping malls," *Asia Pacific Journal of Marketing and Logistics*, vol. 31, no. 2, pp. 464–479, 2019.

[124] J. Bucko, L. Kakalejčík, and M. Ferencová, "Online shopping: factors that affect consumer purchasing behaviour," *Cogent Business & Management*, vol. 5, no. 1, p. 1535751, 2018.

[125] G. D. Moody, D. F. Galletta, and P. B. Lowry, "When trust and distrust collide online: the engenderment and role of consumer ambivalence in online consumer behavior," *Electronic Commerce Research and Applications*, vol. 13, no. 4, pp. 266–282, 2014.

[126] A. Rahnamaee and P. D. Berger, "Investigating consumers' online purchasing behavior: single-brand e-retailers versus multi-brand e-retailers," *Journal of Marketing Analytics*, vol. 1, no. 3, pp. 138–148, 2013.

[127] E. Mazaheri, M. O. Richard, and M. Laroche, "The role of emotions in online consumer behavior: a comparison of search, experience, and credence services," *Journal of Services Marketing.*, vol. 26, no. 7, pp. 535–550, 2012.

[128] M. O. Richard, *Online Consumer Behavior: A Comparison between Canadian and Chinese Website Visitors*, 2011.

[129] J. Koch, B. Frommeyer, and G. Schewe, "Online shopping motives during the COVID-19 pandemic—lessons from the crisis," *Sustainability*, vol. 12, no. 24, p. 10247, 2020.

[130] J. Cruz-Cárdenas, E. Zabelina, O. Deyneka, J. Guadalupe-Lanas, and M. Velín-Fárez, "Role of demographic factors, attitudes toward technology, and cultural values in the prediction of technology-based consumer behaviors: a study in developing and emerging countries," *Technological Forecasting and Social Change*, vol. 149, article 119768, 2019.

[131] N. Singh, M. Yadav, and O. Sahu, "Consumer acceptance of apparel e-commerce-Ethiopia," *Intellectual Economics*, vol. 10, no. 1, pp. 55–62, 2016.

[132] N. Singh and O. Sahu, "Feasibility assessment for e-commerce: a data collection from developing country (Ethiopia)," *MethodsX*, vol. 9, article 101639, 2022.

[133] C. Guthrie, S. Fosso-Wamba, and J. B. Arnaud, "Online consumer resilience during a pandemic: an exploratory study of e-commerce behavior before, during and after a COVID-19 lockdown," *Journal of Retailing and Consumer Services*, vol. 61, article 102570, 2021.

[134] T. Jindal, P. Bassi, and M. Kaur, "Influence of demographic profile of consumers on online shopping behaviour," *Think India Journal*, vol. 22, no. 4, pp. 4338–4352, 2019.

[135] H. M. Al-Hattami, "Determinants of intention to continue usage of online shopping under a pandemic: COVID-19," *Cogent Business & Management*, vol. 8, no. 1, article 1936368, 2021.

[136] S. D'Alessandro, A. Girardi, and L. Tiangsoongnern, "Perceived risk and trust as antecedents of online purchasing behavior in the USA gemstone industry," *Asia pacific journal of marketing and logistics*, vol. 24, no. 3, pp. 433–460, 2012.

[137] S. Gu, B. Ślusarczyk, S. Hajizada, I. Kovalyova, and A. Sakhbieva, "Impact of the COVID-19 pandemic on online consumer purchasing behavior," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 16, no. 6, pp. 2263–2281, 2021.

[138] L. T. Huyen, A. L. Carrel, and H. Shah, "Impacts of online shopping on travel demand: a systematic review," *Transport Reviews*, vol. 42, no. 3, pp. 273–295, 2022.

[139] L. P. Ling and R. Yazdanifard, "Does gender play a role in online consumer behavior," *Global Journal of Management and Business Research: E Marketing*, vol. 14, no. 7, pp. 61–68, 2014.

[140] Tate, "Explaining purchasing behavior within World of Warcraft," *Journal of Computer Information Systems*, vol. 52, no. 3, pp. 18–30, 2012.

[141] L. Zhang, W. Tan, Y. Xu, and G. Tan, "Dimensions of perceived risk and their influence on consumers' purchasing behavior in the overall process of B2C," in *Engineering Education and Management*, pp. 1–10, Springer, Berlin, Heidelberg, 2012.

[142] M. A. Bonn, W. G. Kim, S. Kang, and M. Cho, "Purchasing wine online: The effects of social influence, perceived usefulness, perceived ease of use, and wine involvement," *Journal of Hospitality Marketing & Management*, vol. 25, no. 7, pp. 841–869, 2016.

[143] F. Gunawan, M. M. Ali, and A. Nugroho, "Analysis of the effects of perceived ease of use and perceived usefulness on consumer attitude and their impacts on purchase decision on PT Tokopedia in Jabodetabek," *European Journal of Business and Management Research*, vol. 4, no. 5, 2019.

[144] Y. J. Lim, A. Osman, S. N. Salahuddin, A. R. Romle, and S. Abdullah, "Factors influencing online shopping behavior: the mediating role of purchase intention," *Procedia economics and finance*, vol. 35, pp. 401–410, 2016.

[145] A. Picincu, *Consumer Behavior Research Methods*, CHRON, 2020.

[146] M. Jiang, N. J. Rifon, S. R. Cotten et al., "Bringing older consumers onboard to online banking: a generational cohort comparison," *Educational Gerontology*, vol. 48, no. 3, pp. 114–131, 2022.

[147] J. Y. Yong, M. Y. Yusliza, and O. O. Fawehinmi, "Green Human Resource Management: A Systematic Literature Review from 2007 to 2019," *Benchmarking: An International Journal*, vol. 27, 2020.