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# The Agency of Consumer Value and Behavioral Reasoning Patterns in Shaping Webrooming Behaviors in Omnichannel Retail Environments

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**Abstract:** With tremendous technological advancements, traditional retailing has progressively been transformed into an omnichannel retail environment. While making an appeal to the behavioral reasoning theory, this paper explicates consumers' (hedonic and utilitarian) value expectations and behavioral reasoning patterns as key antecedents of the maturing of their webrooming intentions in omnichannel environments. Performing PLS-based structural equation modeling on survey data obtained from 470 consumers, it has been found that both the (perceived) value and behavioral reasoning patterns of the consumers exhibit significant direct and indirect effects on building favorable attitudes toward webrooming that eventually lead to the culmination of pro-webrooming intentions. Besides expanding our understanding of the phenomena of interest, this study offers useful insights to marketers/retailers on how to boost pro-webrooming attitudes, intentions, and behaviors by ensuring a superior alignment with (utilitarian and hedonic) value perceptions and pro- and counter-webrooming reasoning patterns of the consumers.

**Keywords:** webrooming; omnichannel retailing; behavioral reasoning theory; fashion apparel; consumer value; reasons (for/against); e-commerce; attitude toward webrooming; webrooming intention



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## 1. Introduction

With the expeditious growth of information technology, customers' preferences are shifting from single-channel to dynamic omnichannel retailing where they can leverage multiple channels of the web and brick-and-mortar to obtain knowledge about products, make smart decisions, and enjoy a seamless buying experience [1–3]. There appears to be a general agreement that the future of retail will be phygital, combining various components of physical and digital retailing to offer customers augmented and seamless purchase experiences optimally utilizing the firm's resources [4]. With multichannel and omnichannel retail strategies, retailers can extend the market of their products and satisfy the newly emerging wants and preferences of their customers. Web3 is paving the way for future retail structure and with technologies like artificial intelligence, augmented reality, and virtual reality, etc. retailers will be able to offer customized recommendations and immersive shopping experiences to customers in offline stores, digital stores, or hybrid channels [4,5].

Webrooming signifies an omnichannel buying behavior in which customers search for product information from digital sources but eventually end up buying the product offline [6]. Webrooming has been recognized as the most emergent form of omnichannel

buying behavior in the silicon age and is anticipated to grow in the future due to a surge in the usage of mobile phones and gadgets by consumers in their buying processes [1,7].

Along with the U.S. and European markets, customers in Asian countries have been adopting webrooming with unprecedented progression [2,8,9]. It has been reported that single-channel retailers are quite noticeably adapting omnichannel retail strategies to keep up with the evolving buying patterns of consumers and the rapidly changing retail structures [10–12]. By implementing an omnichannel approach, the retail sector can impart sustainable consumption and production by having a small number of physical storefronts and less distribution of inventory and, essentially, by increasing customer awareness and understanding of sustainability [13,14]. The retailers' capacity to offer a coherent consumer experience from the search for products to after-sales services has been significantly impacted by the swift conversion of customers toward webrooming and showrooming behaviors [15]. However, adverse influences of webrooming on the sales of digital sellers have also been documented [11]. Plentiful webroomers undertake free-riding behavior by searching for product information from one channel while completing purchases through another channel [12,16]. Even though webrooming is an emerging and momentous issue, the literature encompassing cardinal aspects of such a marvel is still quite frail [1,2,17].

A host of prior studies have examined the determinants of consumers' webrooming intentions in various contexts [2,12,18]. However, these studies have not adequately taken into consideration consumers' behavioral reasoning (for and against) for webrooming behavior. Retailers and marketers essentially need to understand how consumers' behavioral reasoning patterns affect their webrooming behaviors [19] to establish effective marketing/retailing strategies to retain customers through cementing relationships by providing a sublime customer experience in an omnichannel retail environment. The authors contest that no previous studies have even passably integrated 'reasons for' (motivators) and 'reasons against' (barriers) the display of webrooming behavior, especially simultaneously in a unified model. While augmenting it with consumer value, this study intends to tap this gap in examining webrooming behaviors while making an appeal to the behavioral reasoning theory (hereafter BRT) as the underpinning theoretical framework. BRT is a relatively emerging theory that helps to examine the innovative cognitive pathways adopted by customers in making decisions [20].

The main objectives of this study include (1) examining how consumers' value and reasoning (for and against) patterns influence their attitude and webrooming intentions; (2) enriching the literature on webrooming given that it stands among one of the prime attempts to empirically substantiate the impact of behavioral reasoning on webrooming behaviors using BRT; (3) assessing the mediation effects of behavioral reasoning in the association between consumer value and consumer attitude toward webrooming; (4) offering practical insights to marketers and/or retailers to enhance customer satisfaction through providing comfortable and smart purchase experiences to retain them for longer time. The research questions of the current study are as follows:

(1) What is the influence of consumer value and consumer reasoning on attitude and intention toward webrooming behavior in an omnichannel retail environment?
(2) Does attitude toward webrooming impact webrooming intention in an omnichannel retail environment?
(3) Is there a mediation effect of behavioral reasoning (for/against) on the association between consumer value and consumer attitude toward webrooming?

The paper is structured as follows. The subsequent part presents a comprehensive review of the literature, rolls out our conceptual model, and expounds on the hypothesized relationships among the subject constructs. Section 3 discusses the research methodology. Section 4 presents the results of our investigation. Section 5 furnishes an extended discussion ensuing from the results presented in the previous section, the theoretical and practical implications, as well as limitations and recommendations for future research.

## 2. Literature Review

### *2.1. Behavioral Reasoning Theory (BRT)*

This research has employed BRT [19] as the underpinning theoretical framework. BRT provides a thorough exposition of consumers' intentions and behaviors by scrutinizing the relationships between values, 'reasons for', 'reasons against', attitudes, and intentions toward distinct behaviors [21]. The overarching theory of BRT outperforms traditional behavioral theories, including the theory of reasoned action (TRA) [22], the theory of planned behavior (TPB) [23], and the technology acceptance model (TAM) [24], in its ability to account for comparatively higher variance in users' intentions and behaviors. So far, plenteous studies in diverse contexts have been conducted based on the theory of BRT because of its merits in enumerating key dynamics of decision-making in specific contexts. BRT components aid researchers, marketers, and practitioners in understanding complicated consumer behavior issues and behavioral mechanisms, enabling them to create more effective marketing strategies and better policy-making [20]. Even though, utilizing behavioral theories such as TRA, TPB, and TAM has helped marketing researchers and practitioners gain significant insights into how consumers make decisions in variegated situations, these theories are subject to several shortcomings, and many academicians have questioned their potential in predicting and generalizing customer behaviors [25,26].

While the extension of BRT theory to the marketing discipline can be seen as a supplementation of established theories like TPB, it still exhibits several advantages over its earlier counterparts [19,21]. First, to gain a meticulous understanding of individuals' decision-making process, BRT incorporates the important elements of 'reasons in favor' and 'reasons against' that could influence individuals' attitudes, behavioral intentions, and consequent behaviors. 'Reasons for' and 'reasons against' are not merely opposites—they represent two distinct perspectives of individuals' behaviors. Second, BRT offers new cognitive pathways through reasons 'in favor' and 'reasons against' to better comprehend the decision-making process of individuals. Third, BRT demonstrates the significant impact of varying constituents of consumers' perceived value in affecting their reasoning, and attitudes which influence the subsequent behavioral intentions. A review of previous studies based on the BRT framework further supports the merits of the theory by revealing that it better explains the variance in the dependent variable compared with alternative behavioral theories [20]. BRT has been used by scholars in various studies, mostly to explain the effects of certain contextual contingencies only [27,28]. In this study, various constituents of consumers' perceived value and behavioral reasoning patterns have instead been employed as exogenous and mediating antecedents of attitudes and intentions toward webrooming.

In previous studies, webrooming behavior has been examined mostly by applying behavioral theories such as TRA, TPB, and TAM [6,18]. Though these theories are quite capable of explaining consumer webrooming intentions, they lack the potential to incorporate barriers (resistance factors) that affect webrooming intentions, which is conspicuously relevant as it could help researchers in elucidating broader cognitive aspects of consumers' webrooming behavior [19]. Therefore, we preferred to use BRT because of its presumed efficacy to account for the dynamics of consumers' webrooming intentions, through incorporating 'reasons for' and 'reasons against' webrooming and linking these conceptually distinct antecedents with two important constituents of consumer value, attitude, and webrooming intention in a unified theoretical framework (see Figure 1).

The relevant study context has been the fashion apparel industry. The fashion industry holds significant importance in any country's economy [29]. However, this industry is facing many challenges, including changing consumers' buying behaviors due to rapid technological advancements, the outbreak of global pandemics like COVID-19, increased desirability for customized offers, the application of the latest technologies in brick-and-mortar channels, and others. As a result, the fashion industry is currently experiencing a colossal transformation in the form of omnichannel retailing [29] manifested through an enhanced display of omnichannel buying behaviors, such as webrooming [1,30]. Due to

the tremendous growth of internet users in Pakistan, switching to an omnichannel retail structure creates new opportunities for innovation and advancement. Fashion retailers in Pakistan are currently endeavoring to transform into lifestyle brands through the adoption of omnichannel retail strategies and connecting with customers through various touch points. However, certain fashion retailers underutilize basic Internet commerce functions and mobile platforms, which impedes the usefulness and coherence of the omnichannel retail environment [31].

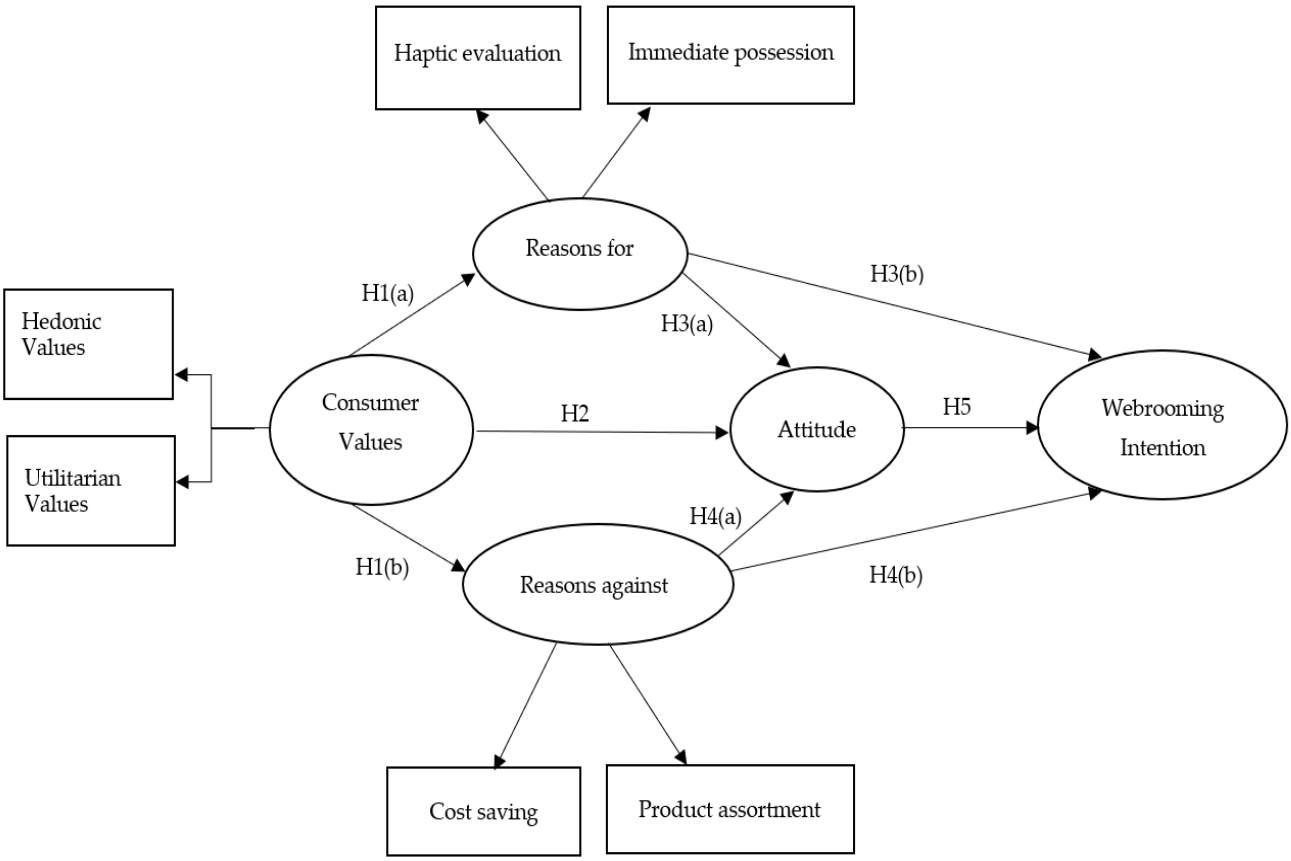


**Figure 1.** The conceptual model.

### *2.2. Hypotheses of Study*

#### 2.2.1. Webrooming Behaviors

In a precise sense, webrooming corresponds to information search online but buying offline. In the face of the widespread use of mobile devices by consumers during their purchasing process, the rise of widely exhibited purchasing behavior of webrooming is expected to further intensify [12]. According to Gensler et al. (2012) [32], consumers integrate digital and physical channels during their purchase passage to reduce associated buying costs and maximize potential advantages. Electronic word-of-mouth (eWOM), referred to as sharing of views, experiences, and suggestions related to products and services on internet platforms [33], has emerged as a significant advertising tool as well as an influential motivator for consumer decision-making. Customers are now rewarded and given interesting offers by companies if they spread awareness about their products and encourage purchasing, such as through social networking sites (SNSs) (e.g., Facebook, Twitter, Instagram) [33–35]. However, the credibility of internet platforms is a concern for consumers, which is the key reason customers avoid making online purchases [36]. Thus, in order to be confident about their purchases, consumers become motivated toward webrooming behavior [17].

The literature on webrooming behavior with theoretical underpinnings of TPB and TAM has revealed that the advantages of searching through online channels, such as lower search costs and wider product assortment but purchasing from offline stores to receive appropriate benefits stemming from haptic evaluation, immediate possession, the assistance of sales staff, etc., influence customers' attitudes and intentions toward webrooming [17]. For example, fashion apparel could be graphically evaluated online, but the physical examination of apparel fitness could only be carried out in physical stores [12]. Additionally, prices in physical channels are typically higher compared with online channels, and if this price difference is substantial, buyers may be unwilling to engage in webrooming and may prefer to execute their purchases through online channels [37]. It has been argued that consumers think that webrooming saves time, effort, and energy and causes more appropriate purchase decisions compared with brick-and-mortar showrooms. Studies have suggested that offline stores still hold prime importance in omnichannel strategies and that the interplay between the benefits of the offline channel and value-added services of online channels enable retailers to provide a unified customer experience [31,38]. Moreover, webrooming behavior creates increased control and responsibility in consumers compared with showrooming behavior [1]. Even though prior studies have laid down some foundation to understand the dynamics of webrooming, there is still a noticeable dearth of research efforts to explore its key antecedents and significance in an omnichannel retail landscape [2]. Our study aims to bridge this critical deficiency in the contemporary age marked by Marketing 4.0 [39].

#### 2.2.2. Consumer Value and the Behavioral Reasoning

Consumer value quadrates with the motivations that incite individuals to make choices commensurable with their desirable outcomes [40]. It has been empirically demonstrated that (perceived) value influences consumers' behaviors [41,42]. BRT suggests that the ingrained consumers' value influences the reasons underlying their behaviors [19]. Other empirical studies e.g., [43,44] in the marketing literature lend support to the study of [19]. Shopping motivations, driven by goals, direct the ways customers do shopping [45]. Customers who hold utilitarian values desire to complete their purchasing process efficiently. However, for consumers who seek hedonic value, the goal of shopping is to amplify stimulation and enjoyment during the purchase process [46]. Customers like to purchase through channels that are consistent with their shopping motivations [3,47]. Therefore, it is important to understand how various constituents (e.g., utilitarian and hedonic) of consumer value are linked with reasons (for and against) webrooming. Hence, the following statement is hypothesized:

**H1(a).** *Consumer value is significantly associated with "reasons for" webrooming behavior.*

**H1(b).** *Consumer value is significantly associated with "reasons against" webrooming behavior.*

#### 2.2.3. Consumer Value and Attitude toward Webrooming

Consumer value plays an essential role in effectuating individuals' attitudes [48]. It has been found that perceived value influences attitudes and that consumers justify their specific behaviors on the grounds of their sought values [40]. According to research, if an individual finds a product to be compatible with his/her value expectations, he/she may readily accept it [43]. Behavioral theories like TRA and TPB have also supported that individuals' value expectations have a substantial impact on their attitudes [18]. Hence, it is postulated that consumers' values affect attitudes toward webrooming. Consequently, it is hypothesized that:

**H2.** *Consumer value is significantly associated with the attitude toward webrooming.*

#### 2.2.4. 'Reasons for', Attitude, and Webrooming Intention

'Reasons for' are the motivators or facilitators that can create favorable perceptions about a certain behavior. The extant literature has emphasized the importance of haptic

evaluation and immediate possession in motivating consumers to engage in webrooming [12,49]. Hence, in this study, integrants of 'reasons for' include haptic evaluation and immediate possession.

Haptic Evaluation: Previous research has demonstrated the importance of haptic evaluation of products through touch and feel to assess relevant product features while selecting the appropriate products [49,50]. Offline channels have an edge over web channels because they allow for the opportunity of product evaluation through haptic sensing, which helps consumers to reduce risk, reluctance, and uncertainty, thus motivating them to engage in webrooming behavior [49,51]. The need for touch for haptic evaluation of the products before purchase is motivated by various factors pertaining to the product, the individual, and the situation [52]. González-Benito et al. (2015) [53] suggested that the need for tactile evaluation of products is greater for the purchase of experience-based goods, like apparel and cosmetics. Despite the popularity of e-commerce, millennial customers, who possess a strong desire for haptic assessment of products, feel hesitant and less confident about their purchase decision without examining the products with haptic senses, which encourages them to engage in webrooming activity in their purchase journey [6,54]. The web channels present impediments for consumers in the evaluation of important apparel features, such as apparel size and fit [55], visual appearance (color and style) [56], and apparel quality [57] before making the actual purchase [58]. Haptic evaluation of the products generally increases consumers' ability to comprehend product information, which subsequently strengthens consumers' confidence in their buying decisions [59]. Certain customers choose to use the click-and-collect service to have clothing products delivered to the store so that the product can be immediately assessed and returned if it does not meet the expectations of the customer [58,60].

Immediate possession: Shopping channels vary in managing product delivery, which significantly affects the time lag in product possession by the customer [61]. Immediate possession is an important benefit that motivates consumers toward webrooming [62]. Generally, offline channels have supremacy over online channels because they provide immediate possession of products. By purchasing from physical stores, customers can take possession of their purchases right away; however, when purchasing from online platforms, customers have to wait for an uncertain time before they can actually take possession of their purchases [49,63]. Compared with showrooming, where the customers may have decreased control over the result of their purchase, webrooming increases customers' confidence in making better purchases [1]. The possibility of gaining products' instant possession increases the trust of customers since they receive the value of their money right at the purchase time [11]. Products with experiential attributes, such as fashion apparel, exhibit high symbolic meanings, making them highly hedonic in nature, which increases the need for immediate possession [64,65]. Different studies that investigated the influence of the need for immediate possession of the product in the context of cross-channel buying behaviors have found that immediate possession significantly influences customers' intention to purchase from offline stores because immediate possession provides instant gratification to the customers [1,6,63]. Moreover, the influence of immediate possession is believed to be stronger for millennials, who are often motivated by the desire for immediate satisfaction [66]. Henceforth, it can be reasonably assumed that customers may choose brick-and-mortar channels to buy fashion apparel to gain their possession instantly.

It has been discovered that 'reasons for' have a significant influence on consumer behavior in diverse domains [44,67]. As a result, it could reasonably be contemplated that 'reasons for' webrooming have a positive relationship with attitudes and intentions toward webrooming. Thus, the following hypotheses are proposed:

**H3(a).** *'Reasons for' have a significant and positive association with attitudes toward webrooming behavior.*

**H3(b).** *'Reasons for' have a significant and positive association with webrooming intentions.*

2.2.5. 'Reasons against', Attitude, and Webrooming Intention

'Reasons against', acting as barriers or resistance factors, can negatively affect individuals' attitudes toward certain behaviors [20]. Innovation resistance theory [68] suggests five types of 'reasons against' or barriers that can negatively influence innovation adoption behaviors, including value barriers, risk barriers, usage barriers, image barriers, and tradition barriers. Generally, value barriers correspond to the perceived financial benefits obtained by the customers [69]. Therefore, in this study, cost saving has been incorporated as a value barrier toward webrooming behavior. In addition, it has been argued that product variety could induce consumers' preference for online shopping channels [70].

Cost savings: Consumers have been found to be increasingly engaged in webrooming as they tend to search digital channels for price comparisons to find the best prices available prior to purchasing from offline channels [71,72]. On the other hand, it has been found that consumers first go to offline stores to search and compare products and prices but shift to online channels for final purchase to get better prices/discounts and allowances offered by the virtual channels [12,50]. Because of their business model, online retailers do not have the cost pressures such as store rent, decoration, and human resource expenses, so they can offer products at lower prices through offers, deals, and discounts [73]. It has been found that the unparalleled price benefits offered on virtual channels are inimitable by the physical channels and act as reasons behind consumers' resistance to engaging in webrooming [73]. Various types of offers, deals, and discounts are available through digital channels—for instance, consumers can avail discounts by making payments through their credit/debit cards and e-wallet, using free shipping of the product(s) on purchases above a certain amount of money, etc. Additionally, many online retailers forgo the shipping charges that were once a resistance factor to online buying, thus further enhancing the image of online purchasing as an economical purchasing approach [12]. It has been evidenced that one of the main factors driving individuals to choose showrooming is the opportunity to purchase cheaper products from online channels [74]. Also, it has been found that bargain hunting impedes consumers' webrooming intention [12]. Hence, it could be delineated that if customers anticipate saving money in buying from online channels, they may prefer to make the final purchase from online channels instead of physical channels, demonstrating that cost savings can affect consumers' attitudes and intentions and as such serve as a barrier to webrooming behavior.

Product assortments: Retailers can take advantage of a consistent and reputable image of integrated channels by meeting the psychological demands of consumers, like emphasized channel integration benefits and intricate assortment structures [75,76]. Consumers search for diverse product assortment in the buying process not only to gain utilitarian benefits but also to experience variety seeking [77]. With multichannel buying behavior, consumers can enhance their knowledge about products, access a wider product assortment, and compare prices of products across different channels, which helps them achieve utilitarian and economic goals [78,79]. Conventional offline retailers can provide only a portion of their whole product variety because of the limited space in the retail stores [80]. Since virtual stores do not face inventory issues like limited shelf spaces as offline stores do, they can offer a wide variety of products [81,82]. Online retailers like Amazon and eBay put additional pressure on offline stores by increasing the variety of products they provide [83]. Previous literature has evidenced that a broader and wider product assortment available through digital channels positively influences consumers' attitudes and intentions to make purchases from digital channels [84]. Thus, it can be set forth that tapered product assortment can act as a barrier to consumers' attitudes and intentions toward webrooming.

Research-based on the BRT has demonstrated that 'reasons against' could have a negative impact on customers' attitudes and behavior-related intentions [44]. In line with previous studies, it could inevitably be postulated that there is an inverse relationship of 'reasons against' with the attitude and intention toward webrooming. As a result, the following is hypothesized:

**H4(a).** *'Reasons against' have a significant and negative association with attitudes toward webrooming behavior.*

**H4(b).** *'Reasons against' have a significant and negative association with webrooming intentions.*

#### 2.2.6. Attitude and Webrooming Intention

Attitudes are referred to as global motives that influence individuals' behaviors in a variety of contexts [19]. Supporting other behavioral theories, BRT posits that attitude is an important construct in predicting intention. A positive attitude toward a behavior has been found to increase one's intention to engage in that behavior [85]. Prior research grounded on BRT—e.g., studies on intention to purchase organic food [67,86], and m-commerce [87]—have demonstrated that favorable attitudes positively influence behavioral intentions. In accordance with the findings of past research, the following is hereby postulated:

**H5.** *Attitude toward webrooming behavior has a positive association with a webrooming intention.*

#### 2.2.7. The Mediation Effect Hypothesis

Examining the mediating effects of reasons (in favor and against) for behavior can reveal new insights into how consumers make decisions in specific situations [67]. To fill the attitude–intention gap, it is essential to investigate the mediating impact of reasons (in favor and against). Based on BRT, mediation effects of 'reasons for' (motivators) and 'reasons against' (barriers) on, such as underutilization of urban bicycle commuting [21], purchase intentions for suboptimal food [88], and purchase intentions for organic food [67], have been investigated in empirical studies. Hence, it could be assumed that the impact of consumer (hedonic and utilitarian) value in promoting a positive attitude toward webrooming is significantly mediated through 'reasons for' and 'reasons against' the adoption of webrooming behavior. In consonance with the scholarly discourse presented above, it is hypothesized that:

**H6.** *'Reasons for' mediate the relationship between consumer value and attitude toward webrooming.*

**H7.** *"Reasons against" mediate the relationship between consumer value and attitude toward webrooming.*

## 3. Materials and Methods

### *3.1. The Measurement Scales*

A structured instrument (i.e., a questionnaire) has been constructed to collect the data. The questionnaire comprised two sections. In the first section, demographic information of the respondents was required. The second section contained 25 scale items to measure 8 constructs of the proposed model, using a five-point Likert scale with a range of responses from strongly disagree (1 = SD) to strongly agree (5 = SA). The lone exogenous construct of our model, i.e., consumer value has been measured as a second-order construct through two first-order reflective indicators, i.e., hedonic value and utilitarian value while adapting scales used by [18]. 'Reasons for' construct has been measured as a higher-order construct through a couple of first-order reflective indicators, i.e., haptic evaluation (HE) and immediate possession (IP), adapting scale items from [18] and [7] respectively. 'Reasons against' construct has also been measured the same way, employing two first-order reflective indicators, i.e., cost saving (CS) and product assortments (PA), adapting scale items from [50] and [61] respectively. The scale items to measure *attitude toward webrooming* were adapted from [89], whereas scale items for *intention toward webrooming* were adapted from [6]. The constructs of this study along with their respective scale items are mentioned in Table A1 (Appendix A). To confirm the validity and reliability of the measurement instruments, a pilot study was conducted with 60 participants. The Cronbach's alpha values of all the variables met the required threshold value of >0.70, which confirmed the reliability of all the constructs.

### *3.2. Data Collection*

The data were gathered from individuals (fashion apparel customers) aged from 18 to 55 years, including both males and females, living in two metropolitan cities, i.e., Islamabad (capital territory) and Lahore, and three other cities, i.e., Multan, Bahawalpur, and Vehari in the province of Punjab, Pakistan. As a rapidly expanding Asian e-commerce market, Pakistan has giant online businesses, like Alibaba Group and Amazon. The massive expansion of e-commerce has significantly altered Pakistani customers' shopping habits. According to a report by [90], around 89% of shoppers in Pakistan search for women's fashion clothing on digital channels before making the final buy [8]. Data were collected using convenience sampling augmented with snowball additions since the population was unknown and the sampling frame was not available [91]. Data collection was administered by distributing a total of 700 online questionnaires among participants through online platforms, out of which 523 responses were received. After preliminary screening, 470 responses were considered useful for data analysis with a recovery rate of 65.7%.

### *3.3. Data Analysis*

For analyzing the data, PLS-SEM has been employed, using Smart PLS 4.0 [92]. PLS-SEM is a widely accepted and frequently used statistical analysis technique that offers flexibility, robustness, and accuracy and has been usefully applied in various types of analysis across multiple disciplines of social sciences. PLS-SEM has been preferred since it allows researchers not only to analyze the overall fit of a model but also to simultaneously calibrate the structural model relationships [93,94]. The research model has been analyzed using the two-stage approach, assessing (1) the measurement model and (2) the structural model for path analysis and hypotheses testing [92]. The results obtained from the data analysis are presented in the following section.

## 4. Results

### *4.1. Sample Profile*

Table 1 presents the demographic profile of the sample.

**Table 1.** Demographic profile of the respondents.

| Variable | Category | Frequency | Percentage |
|---|---|---|---|
| Gender | Females | 238 | 51.7 |
| | Males | 222 | 48.2 |
| Age | 18–25 years | 326 | 70.8 |
| | 26–35 years | 81 | 17.6 |
| | 36–45 years | 43 | 9.3 |
| | 46–55 years | 10 | 2.2 |
| Marital status | Married | 113 | 24.5 |
| | Unmarried | 347 | 75.4 |
| Education | Bachelor | 225 | 48.9 |
| | Diploma or equivalent | 6 | 1.3 |
| | High school | 10 | 2.2 |
| | Master | 175 | 38.0 |
| | Others | 20 | 4.3 |
| | PhD | 24 | 5.2 |
| Work status | Businessman | 19 | 4.1 |
| | Government employee | 62 | 13.5 |
| | Private employee | 36 | 7.8 |
| | Student | 314 | 68.3 |
| | Unemployed | 29 | 6.3 |

**Table 1.** *Cont.*

| Variable | Category | Frequency | Percentage |
|---|---|---|---|
| Income per month (PKR) | 100,001–150,000 | 34 | 7.3 |
| | 25,001–50,000 | 65 | 14.1 |
| | 50,001–100,000 | 61 | 13.3 |
| | Above 150,000 | 30 | 6.5 |
| | Less than 25,000 | 270 | 58.7 |

### *4.2. Assessment of the Measurement Model*

#### 4.2.1. First-Order Reflective Constructs

Factor loadings of all first-order constructs of the proposed model have been found to be well above the threshold values prescribed by [95]. Internal consistency reliability of the constructs was evaluated utilizing Cronbach's alpha and composite reliability (CR), and the values of all constructs surpassed the acceptability thresholds. Table 2 contains the relevant statistics.

**Table 2.** Assessment of the measurement model.

| First-Order | | Outer | Cronbach's | Composite | |
|---|---|---|---|---|---|
| **Constructs** | **Items** | **Loadings** | **Alpha** | **Reliability (CR)** | **AVE** |
| ATT | ATT1 | 0.84 | | | |
| | ATT2 | 0.854 | 0.868 | 0.91 | 0.716 |
| | ATT3 | 0.863 | | | |
| | ATT4 | 0.827 | | | |
| INT | INT1 | 0.856 | | | |
| | INT2 | 0.888 | 0.844 | 0.906 | 0.763 |
| | INT3 | 0.876 | | | |
| HE | HE1 | 0.859 | | | |
| | HE2 | 0.801 | 0.765 | 0.865 | 0.68 |
| | HE4 | 0.813 | | | |
| IP | IP1 | 0.752 | | | |
| | IP2 | 0.758 | 0.638 | 0.805 | 0.579 |
| | IP3 | 0.773 | | | |
| HV | HV1 | 0.864 | | | |
| | HV2 | 0.881 | 0.83 | 0.898 | 0.746 |
| | HV3 | 0.846 | | | |
| UV | UV1 | 0.842 | | | |
| | UV2 | 0.834 | 0.78 | 0.871 | 0.693 |
| | UV3 | 0.821 | | | |
| CS | CS1 | 0.716 | | | |
| | CS3 | 0.829 | 0.714 | 0.839 | 0.636 |
| | CS4 | 0.841 | | | |
| PA | PA1 | 0.856 | | | |
| | PA2 | 0.842 | 0.806 | 0.886 | 0.721 |
| | PA3 | 0.849 | | | |

(ATT = Attitude, INT = Intention, HE = Haptic Evaluation, IP = Immediate Possession, RF = Reasons For, CS = Cost Saving, PA = Product Assortment, RA = Reasons Against, UV = Utilitarian Values, HV = Hedonic Values, CV = Consumer Values, CR = Composite Reliability, AVE = Average Variance Extracted).

Table 2 shows that all the constructs, other than the construct of immediate possession, meet the required threshold value of Cronbach's alpha = 0.70, but the CR value of immediate possession (CR = 0.805) meets the threshold value of composite reliability = 0.70. CR provides better results than Cronbach's alpha for internal consistency and reliability of the

constructs [96]. Hence, the internal consistency reliability of all the constructs of the current study is established [96]. The values of average variance extracted (AVE) of the constructs range from 0.579 to 0.763 and are above the threshold value of AVE = 0.50, showing that convergent validity of all constructs is established [97,98]. The results of discriminant validity are presented in Table 3, which shows that discriminant validity of all constructs is established since the square root of average variance extracted (AVE) of each construct is more than its correlations with other constructs in the model, as suggested by [96,99].

**Table 3.** Discriminant validity of first-order constructs by Fornell–Larcker criterion.

| | ATT | CS | HE | HV | INT | IP | PA | UV |
|---|---|---|---|---|---|---|---|---|
| ATT | 0.846 | | | | | | | |
| CS | 0.388 | 0.797 | | | | | | |
| HE | 0.562 | 0.353 | 0.825 | | | | | |
| HV | 0.518 | 0.378 | 0.422 | 0.864 | | | | |
| INT | 0.719 | 0.427 | 0.497 | 0.534 | 0.873 | | | |
| IP | 0.485 | 0.398 | 0.456 | 0.436 | 0.531 | 0.761 | | |
| PA | 0.499 | 0.579 | 0.434 | 0.463 | 0.491 | 0.449 | 0.849 | |
| UV | 0.507 | 0.437 | 0.453 | 0.608 | 0.558 | 0.444 | 0.445 | 0.832 |

(ATT = Attitude, INT = Intention, HE = Haptic Evaluation, IP = Immediate Possession, RF = Reasons For, CS = Cost Saving, PA = Product Assortment, RA = Reasons Against, UV = Utilitarian Values, HV = Hedonic Values).

#### 4.2.2. Second-Order Reflective Constructs

The Cronbach's alpha and CR values of the second-order reflective constructs were greater than the threshold value of 0.70, confirming the reliability of the second-order reflective constructs in our study [92]. The constructs' values of AVE were higher than the cutoff value of 0.50, confirming adequate convergent validity [96,99] (see Table 4). Finally, the findings reported in Table 5 confirm the discriminant validity of the constructs by demonstrating that the square root of AVE of every construct is higher compared with its correlations with all other constructs [99].

**Table 4.** Reliability and validity of second-order reflective constructs.

| Constructs | Cronbach's Alpha | CR | AVE |
|---|---|---|---|
| Reasons for (RF) | 0.706 | 0.836 | 0.629 |
| Reasons against (RA) | 0.776 | 0.869 | 0.689 |
| Consumer Values | 0.756 | 0.891 | 0.804 |

**Table 5.** Discriminant validity of second-order reflective constructs.

| | Attitude | Intention | Reasons against | Reasons for | Consumer Values |
|---|---|---|---|---|---|
| Attitude | 0.846 | | | | |
| Intention | 0.721 | 0.874 | | | |
| Reasons against | 0.503 | 0.52 | 0.888 | | |
| Reasons for | 0.614 | 0.602 | 0.542 | 0.853 | |
| Consumer Values | 0.571 | 0.608 | 0.543 | 0.574 | 0.897 |

### *4.3. Assessment of the Structural Model*

The relationships proposed in the research model were examined using the bootstrapping method with 5000 subsamples and the *t*-test. Path coefficients and coefficients of determination ($R^2$) were used to evaluate the structural model. Table 6 contains the results depicted in Figure 2

**Table 6.** Assessment of the structural model.

| Hypotheses | Paths | ($\beta$) | Std. Errors | t-Value | $p$-Value | Results |
|---|---|---|---|---|---|---|
| H1(a) | CV → RF | 0.574 | 0.037 | 15.392 | 0.0000 | Supported |
| H1(b) | CV → RA | 0.543 | 0.047 | 11.477 | 0.0000 | Supported |
| H2 | CV → ATT | 0.275 | 0.058 | 4.733 | 0.0000 | Supported |
| H3(a) | RF → ATT | 0.375 | 0.053 | 7.095 | 0.0000 | Supported |
| H3(b) | RF → WI | 0.201 | 0.055 | 3.649 | 0.0000 | Supported |
| H4(a) | RA → ATT | 0.15 | 0.065 | 2.33 | 0.0100 | Rejected (due to direction) * |
| H4(b) | RA → WI | 0.147 | 0.049 | 3.021 | 0.0010 | Rejected (due to direction) ** |
| H5 | ATT → WI | 0.524 | 0.05 | 10.549 | 0.0000 | Supported |

* and ** H4(a and b) were not supported as a significant positive relationship has been found instead of a hypothesized negative association, which is counterintuitive. CV, Consumer Values; RA, Reasons For; RA, Reasons Against; ATT, Attitude; WI, Webrooming Intention.

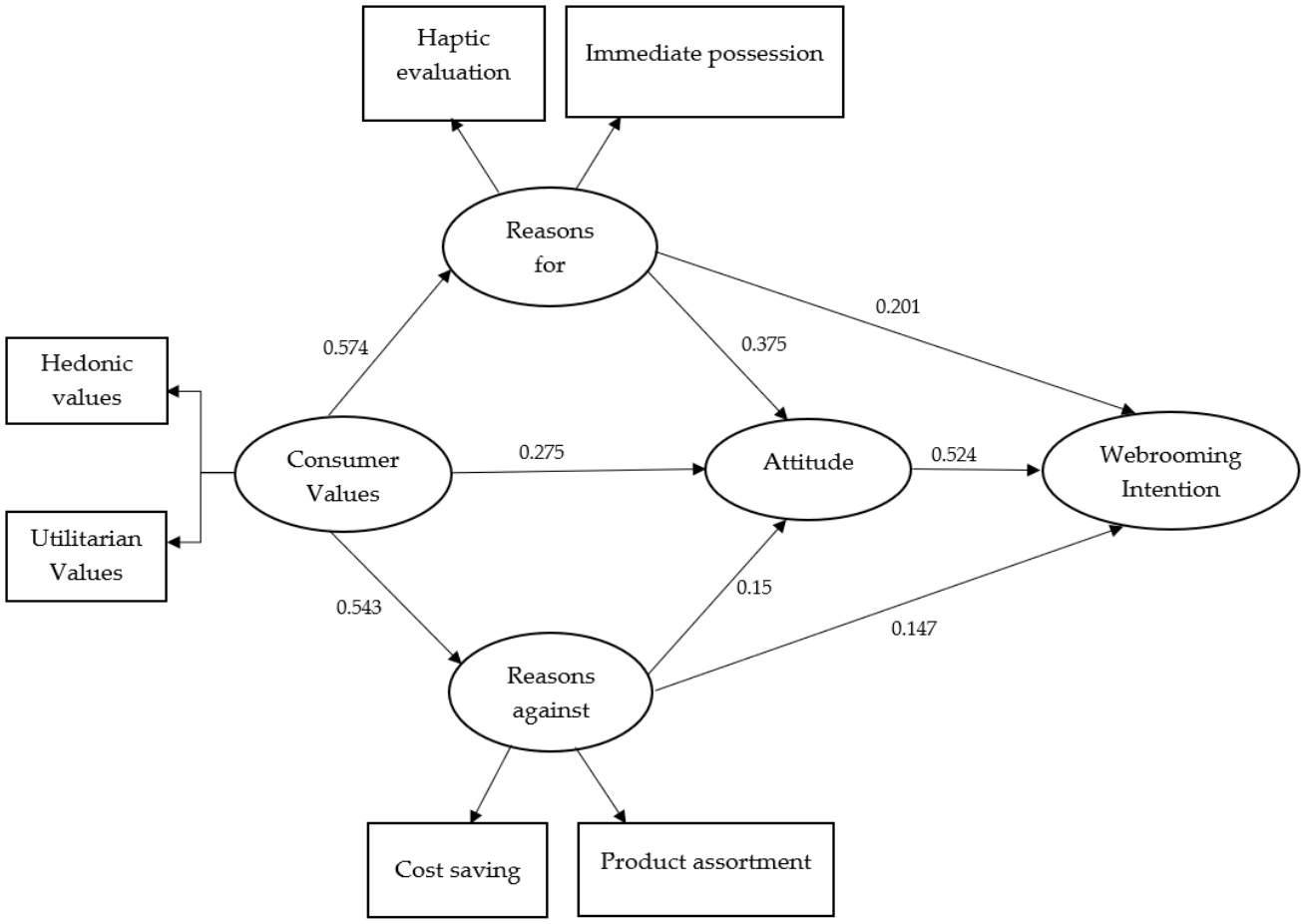


**Figure 2.** Assessment of the structural model.

A significantly positive relationship of consumer value with 'Reasons for' ($\beta$ = 0.574, t = 15.392, $p < 0.001$) and 'Reasons against' has been found ($\beta$ = 0.543, t = 11.477, $p < 0.001$). Thus, H1(a) and H1(b) are supported. A significantly positive association of consumer value with attitude toward webrooming ($\beta$ = 0.275, t = 4.733, $p < 0.001$) indicates that H2 is also supported. Results indicate a significantly positive association of 'Reasons for' with attitude and intention toward webrooming with ($\beta$ = 0.375, t = 7.095, $p < 0.001$), ($\beta$ = 0.201, t = 3.649, $p < 0.001$), respectively. Consequently, H3(a) and H3(b) are also supported. The negative association of 'Reasons against' with attitude and intention toward webrooming is not supported, with ($\beta$ = 0.15, t =2.33, $p > 0.001$), ($\beta$ = 0.147, t =3.021, $p > 0.001$), respectively. Instead, results reflect a significant and positive relationship

which is counterintuitive but has been found in some of the previous studies e.g., [67]. Therefore, hypotheses H4(a) and H4(b) are rejected. Finally, attitude toward webrooming has a significant positive association with the webrooming intention ($\beta$ = 0.524, t = 10.549, $p < 0.001$). As a result, H5 is also supported.

Mediation Analysis

For mediation analysis, we used the bootstrapping method with 5000 subsamples to find the indirect effect with a 95% confidence interval [95]. The results contained in Table 7 show that both hypothesized mediation paths were found to be significant. 'Reasons for' (haptic evaluation and immediate possession) and 'Reasons against' (cost saving and product assortment) exhibit roles of partial mediation in the relationship between consumer value and attitude toward webrooming behavior. Table 8 displays the results of total indirect effects.

**Table 7.** Results of specific indirect effects.

| Paths | Effect | Std. Error | *p* Values | Type of Mediation |
|---|---|---|---|---|
| H6: Consumer Value → 'Reasons for' → Attitude | 0.215 | 0.034 | 0.000 | Partial Mediation |
| H7: Consumer Value → 'Reasons against' → Attitude | 0.082 | 0.035 | 0.018 | Partial Mediation |

**Table 8.** Results of total indirect effects.

| Paths | $\beta$ | *p* Value |
|---|---|---|
| Consumer Value → Attitude | 0.297 | 0.000 |

## 5. Discussion and Conclusions

### *5.1. Discussion*

Webrooming, as a wide-spreading omnichannel buying behavior, has captured the pronounced interest of not only researchers or academicians but also retail practitioners. It has thus become imperative for silicon-age retailers—whether purely online, purely offline, or through multichannel platforms—to fathom and respond to this omnichannel buying behavior to provide delightful retail services to customers to develop lasting relationships that could help in the profound materialization of their bottom lines.

This study offers compelling insights into the influence of consumer value and behavioral reasoning patterns on consumer webrooming behavior in the omnichannel environment. In line with past studies [1,2,6], this study supports the positive association between attitude and webrooming intention in the omnichannel retail context. Also, the findings of this study demonstrate that customer reasoning (in favor/against) has a positive impact on customers' attitudes and intentions toward webrooming in the omnichannel environment since it enables consumers to make informed and confident purchase decisions [3,6,12,54,100].

This study has combined the conceptually distinct constructs of consumers' 'reasons for' and 'reasons against' webrooming behavior into a unified framework by applying BRT as the background theoretical framework and it has investigated the linkages between consumer value, pro- and counter-behavioral reasoning patterns (i.e., 'reasons for', 'reasons against'), attitudes, and intentions toward webrooming. We found significant empirical support for all the hypothesized relationships except for H5 (a and b). In particular, the study discovered the mediating effect of both behavioral reasoning patterns, i.e., 'reasons for' and 'reasons against' webrooming, on the impact of consumer (perceived) value in fostering favorable attitudes toward webrooming behavior (H6, H7), which is quite consonant with past studies investigating similar phenomena while making an appeal to the central tenants of BRT [21,101].

This study examined the role of consumer value in affecting behavioral reasoning patterns that in due course led to the culmination of positive attitudes toward webrooming. Conforming to the findings of previous studies [18,100], the results of this study solidify the contentions that consumer value exhibits a positive influence on 'reasons for' (manifested through haptic evaluation and immediate possession) in effectuating attitude toward webrooming behavior. It could, therefore, be adduced that favorable consumer attitudes toward webrooming are caused by utilitarian (value) expectations to avail benefits of purchasing from offline channels [1,102]. Similarly, in consonance with past studies [18,54], it could be avowed that hedonic needs, such as enjoyment and pleasure, motivate consumers' webrooming behavior as they find it valuable to personally assess the experiential quality of products such as fashion apparel through touch and feel that boost their confidence and pleasure about their purchase decision. Further, though somewhat counterintuitive, it has been demonstrated that consumer value has a positive association with 'reasons against' webrooming behavior. This shows that (utilitarian and hedonic) value expectations enhance the sensitivity of cost savings and wider product assortments (the two constituents of 'reasons against' behavioral reasoning pattern) in developing favorable attitudes toward webrooming behavior. This finding, though, has been contrary to our theorization, but similar results have been encountered by [67]. Hence, certain customer cohorts may prefer to leverage the potential of online sources for making price comparisons but may seek to appropriate these benefits through webrooming and augment these benefits with the other (pro-webrooming) gains, such as haptic evaluation and immediate possession.

The study offers an overriding perspective on how consumer value and behavioral reasoning patterns influence consumer webrooming behavior in the omnichannel environment. Further, lending credence to past studies based on BRT, albeit in different contexts [19,67,103], this study supports the positive association between attitude and webrooming intention. The study found a positive impact of the 'reasons for' pattern of behavioral reasoning in culminating desirable webrooming attitudes and intentions. In line with past studies, this study also demonstrates that customers' attitudes toward webrooming are strongly influenced by the need for haptic examination of the product since it enables consumers to avoid risk and allows them to feel confident about their purchase decisions [6,54]. Similarly, immediate possession is another important factor that motivates shoppers to use webrooming [3,12] to gain instant possession of their purchased product. However, the hypothesized negative association between the 'reasons against' pattern of behavioral reasoning and attitude and intention toward webrooming could not be empirically substantiated. Contrary to the findings of past studies [12,50], this study demonstrated that cost saving positively affects attitudes toward webrooming behaviors. This shows that consumers motivated by cost savings may exhibit webrooming behavior and solicit retail channels only to get the best price deals, regardless of the sequence of using the channels while actualizing their purchasing decisions [1,100]. It could also be postulated that consumers who seek diverse product assortments are likely to engage in webrooming to search for the most appropriate options, supporting the findings of past research studies [100].

### *5.2. Theoretical Implications*

The study makes several contributions to the contemporary scholarly discourse on consumer webrooming behavior. First, this study provides an integrated explanation of the interactions among a host of critical determinants of consumer behavior, i.e., consumer value, 'reasons in favor' (motivating factors), 'reasons against' (barriers), consumer attitudes, and webrooming intentions. Second, this is the first of its kind study that has utilized BRT to empirically examine the dynamics of webrooming behavior. This study has envisaged a substantial impact of consumers' hedonic and utilitarian value expectations and the 'reasons for' pattern of behavioral reasoning on webrooming behavior. Third, the most startling finding of the study has been the positive impact of 'reasons against' webrooming (cost savings and product assortment) in promoting webrooming behaviors—though one

would expect the causality to go in the opposite direction. Researchers like [67] and [100] have reported similar paradoxes. It has been found that searching for information about products and prices in advance on digital channels enables customers to understand contextual reference prices, which helps them to find the best deals and make better purchase decisions in offline stores afterward [12,71]. Similarly, if shoppers believe that offline retailers have a wider and more appealing variety of products, they are more inclined to conduct their searches online but make their final purchases from offline stores [2,104]. Fourth, this study has corroborated the mediation impact of two mirrored patterns of behavioral reasoning, i.e., 'reasons for' (haptic evaluation and immediate possession) and 'reasons against' (cost saving and product assortment) on the relationship between consumer value and attitude toward webrooming. In consonance with the above-mentioned theoretical assertions, it is resolutely championed that behavioral reasoning patterns must be essentially incorporated into the frameworks aiming to gain a comprehensive understanding of webrooming behaviors in omnichannel environments. Finally, another contribution of this study originates from its use of data from South East Asia, which cements the generalizability of the theories coined in the developed world to other geographical and/or cultural contexts.

### *5.3. Practical Implications*

The present research offers germane implications for practitioners, marketers, and retailers. It particularly offers guidance to pure play retailers as well as multichannel retailers on how to develop appropriate omnichannel retail strategies and/or environments to satisfy customers by providing opportune and smart shopping experiences. Retailers of offline channels can provide promotional offers, discounts, and competitive prices to combat consumers' preferences for cost savings offered by digital channels [8,12]. As for multichannel retailers, they should implement the same pricing across all channels [12,105]. To raise the percentage of webroomers, retailers can highlight physical store price promotions on their digital platforms [2]. For successful omnichannel retailing, inventory management must be optimized for the customers and the variety of products must simultaneously be available in physical and online stores to meet the needs of the target consumers [100,106]. Retailers should highlight the availability of expanded product assortments in their offline stores if they seek to utilize assortment benefits to attract internet shoppers to their offline stores [2]. In present times, skeptical customers like to gather all pertinent product information from digital sources and then move to brick-and-mortar stores to make the best purchase decision after appraising the products with haptic senses [107]. Therefore, retailers must make it convenient for customers to find detailed product information online and quickly respond to their queries via chatbots, etc., eventually helping customers efficiently execute final purchases after haptic assessment of products in offline stores [18]. Marketers must make sure that the information provided through offline and digital channels is consistent since the omnichannel environment has faded the distinction between virtual and physical channels [1,108]. Additionally, the latest technologies, like mobile apps, can be used by offline retailers to assist customers in locating stores that sell their desired products [109]. Marketers and retailers should also consider that omnichannel consumers may have varying buying preferences, which means that variant cognitive and affective factors may influence their communication and buying preferences [1], so they need to customize their approach, communications, and assistance accordingly. Specifically, fashion retailers in Pakistan need to embrace omnichannel strategies and develop new competencies to effectively use data gathered from various sales channels to identify areas that need improvement, enhance retail operations, and remodel a smart shopping experience [31].

### *5.4. Limitations and Future Research*

There are some limitations to this study that engender needs and avenues for future research. First, this study has been conducted in the context of Pakistani consumers; it can be extended to other geographical and/or cultural contexts not only to enhance its gen-

eralizability but also to gain fine-grained insights into cross-cultural similarities and/or differences in the dynamics of webrooming. Second, this study has examined the dynamics of webrooming in fashion apparel. Even though fashion apparel signifies the most frequently purchased webrooming articles, future research should include other product categories, such as cosmetics, electronic products, grocery items, and others. Third, this study has examined the mediating influence of reasons (for and against) only. Future research might examine the effects of other mediating conditions as well as some moderating contingencies, such as product involvement, e-distrust, etc., to enhance the explanatory power of the model. Fourth, the study employed a quantitative research design. Future studies may use a qualitative or mixed-method approach to enhance its methodological rigor.

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## Appendix A

**Table A1.** Constructs of the Study with their Items.

| Constructs | Items |
| --- | --- |
| Attitude (ATT) | ATT1: For me, it is a good idea to search for information on online channels but purchase fashion apparel products from physical stores. |
| | ATT2: For me, it is beneficial to search for information on online channels but purchase fashion apparel products from physical stores. |
| | ATT3: For me, it is wise to search for information on online channels but purchase fashion apparel products from physical stores. |
| | ATT4: For me, it is pleasant to search for information on online channels but purchase fashion apparel products from physical stores. |
| Webrooming intention (INT) | INT1: I am likely to collect information for fashion apparel products online before buying them offline. |
| | INT2: It is probable that I will collect information for fashion apparel products online before buying them offline. |
| | INT3: I am certain that I will collect information for fashion apparel products online before I buy offline. |
| Haptic Evaluation (HE) | HE1: I feel more comfortable in purchasing fashion apparel products after physically examining it. |
| | HE2: I would only buy fashion apparel products if I could touch them before purchase. |
| | HE4: I feel more confident making fashion apparel products' purchase after touching the product. |

**Table A1.** *Cont.*

| Constructs | Items |
| --- | --- |
| Immediate Possession (IP) | IP1: I would rather buy fashion apparel products at an offline store than order them online. |
| | IP2: When I order fashion apparel product, I do not want to wait for it to arrive. |
| | IP3: Whenever I purchase fashion apparel product, I want to use it immediately. |
| Cost Saving (CS) | CS1: Online shopping for fashion apparel products saves me money. |
| | CS3: Online shopping for fashion apparel products offers me the competitive prices. |
| | CS4: Online shopping for fashion apparel products provides me with attractive promotional offers. |
| Product Assortment (PA) | PA1: Online shopping offers me access to a variety of fashion apparel merchandise. |
| | PA2: Online shopping offers me access to many brands of fashion apparel products. |
| | PA3: Online shopping offers me access to wide assortment of fashion apparel products. |
| Hedonic Value (HV) | HV1: Purchasing fashion apparel products increases my happiness. |
| | HV2: Purchasing fashion apparel products excites me personally. |
| | HV3: I always enjoy purchasing fashion apparel products. |
| Utilitarian Value (UV) | UV1: I believe fashion apparel products are of superior quality. |
| | UV2: Fashion apparel products are well designed. |
| | UV3: Fashion apparel products last longer. |

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