Journal of
Theoretical and Applied Electronic Commerce Research

MDPI

Article

The Influence of Situational Constraints on Consumers' Evaluation and Use of Online Reviews: A Heuristic-Systematic Model Perspective

Jieun Lee and Ilyoo Barry Hong *

College of Business & Economics, Chung-Ang University, 84 Heukseok-ro, Seoul 06974, Korea; jlee114@cau.ac.kr
* Correspondence: ihong@cau.ac.kr

Abstract: Online reviews help consumers make informed product choices by serving as a valuable source of information for a buying decision. However, consumer's situational constraints such as time pressure or purchase uncertainty negatively impact the way in which buyers evaluate and use online reviews, reducing their effectiveness. This study examines the influence of situational constraints, namely perceived time pressure and purchase uncertainty, on consumers' evaluation and use of online reviews for information search. This empirical study used an online survey to collect data from 560 Amazon Mechanical Turk users. Findings indicate that both perceived time pressure and perceived purchase uncertainty are positively associated with heuristic processing of online reviews but negatively associated with systematic processing of online reviews. Moreover, while both heuristic and systematic information processing increased buyers' self-confidence in their purchase decisions, systematic processing led to greater buyer self-confidence than did heuristic processing. This study concludes with a discussion of practical and academic implications, as well as future research directions.

Keywords: time pressure; buyer uncertainty; situational constraints; online reviews; information search; heuristic-systematic model; consumer behavior

Citation: Lee, J.; Hong, I.B. The Influence of Situational Constraints on Consumers' Evaluation and Use of Online Reviews: A Heuristic-Systematic Model Perspective. *J. Theor. Appl. Electron. Commer. Res.* **2021**, *16*, 1517–1536. https://doi.org/10.3390/jtaer16050085

Academic Editors: Shib Sankar Sana and Sweety Sadhukhan

Received: 4 April 2021
Accepted: 30 April 2021
Published: 8 May 2021

1. Introduction

Consumers are increasingly turning to online reviews—that is, electronic word-of-mouth (e-WOM) which refers to a consumer-generated, consumption-related communication that employs digital tools and is directed primarily to other consumers [1,2]—to guide their buying decisions [3,4]. While online reviews have various benefits, consumers primarily employ this resource to reduce uncertainty regarding purchase consequences, as well as the potential purchase risks involved. Consumers use online reviews to make informed choices by considering the testimonies of other buyers [5,6]. As such, online reviews have come to play a prominent role in the information searches conducted by buyers, whether it be shopping for general merchandise or for a tour package [1,7].

The growing significance of such online reviews as a source of information search prompts the question of how consumer search behavior is influenced by unusual circumstances that limit their ability to choose the best option, including severe time constraints or notable deficiency of product/service knowledge when making a purchase decision. Indeed, consumers making purchase decisions in unusual buying circumstances may be less likely to engage in rational information seeking processes involving the extensive search for and logical processing of relevant information. In such situations, consumers may rely on heuristic strategies in selecting a buying option—prioritizing mental shortcuts in the face of cognitive limitations. In doing so, they are likely to perceive a greater degree of risk and engage in more risk-taking behavior. Consequently, buying constraints will impact the way in which online reviews are selected and used in the purchase decision-making process.

Research to date indicates that buyers facing significant time pressure or uncertainty exhibit a range of behavioral options. For instance, consumers under time pressure tend to take greater risks [8,9], focus on a few critical attributes in order to make a choice [10], or postpone the purchase [11]. Extant studies on uncertainty in the consumer decision-making context have focused on explaining the link between buyer uncertainty and consumers' pre-purchase search behavior [12,13]. Buyers seeking a rational choice often face uncertainty rooted in a lack of information regarding various aspects of a potential purchase [14]. Uncertain buyers tend to rely on extensive information searches to reduce their purchase uncertainty to tolerable levels [12]. While consumers who perceive a high level of purchase uncertainty will likely engage in an extensive search in order to manage that uncertainty [15], those who are under intense time pressure will have difficulty pursuing an active information search regardless of their uncertainty perception. Therefore, the combined effects of these situational constraints are intricate and unpredictable. However, despite substantial research on the effects of time constraints or purchase uncertainty on general consumer behavior, little is known about the intricate effects of consumers' buying context on their evaluation and use of e-WOM [16]. One serious issue with today's review websites is that they do not discern the unique circumstances that individual consumers face which can largely affect their information search process. Consumers with varying degrees of time pressure and of purchase uncertainty will have differing information needs that should be met by a system capable of providing an adequate information path to suit the individual consumer's needs. As Spenner and Freeman [17] put it, not mere details but relevant information tailored to the consumer's unique needs will simplify decision-making by helping them traverse the purchase path quickly and confidently. Nevertheless, while a consumer's ability to take advantage of e-WOM in the course of purchase decision-making would likely be impaired by cognitive limitations imposed by a lack of sufficient time or relevant knowledge, the extant research ignored this issue. This study aims to address this research gap.

This study uses the heuristic-systematic model of information processing to predict how buyers evaluate and employ online reviews to seek and process information under situational constraints. The purpose of this study is to verify whether consumers in circumstances limiting their ability to make a rational purchase decision will find it practically infeasible to apply a systematic decision process and employ a heuristic strategy instead. More specifically, this study focuses on addressing the following research questions (RQ):

RQ1: What impact do perceived time pressure and perceived purchase uncertainty have on information search behavior and purchase decisions in a consumer's buying process?
RQ2: Does a consumer's information search and purchase behavior vary with unpredictable conditions of time pressure and purchase uncertainty?
RQ3: How can an e-commerce practitioner effectively meet the needs of online consumers facing varying degrees of time pressure and purchase uncertainty?

This study will contribute to the existing body of knowledge by helping us to understand the intricate effects of situational constraints such as perceived time pressure and purchase uncertainty on a buyer's evaluation and use of online reviews. The findings of this study will enable us to shed light on how review site owners can improve website design to foster users' access to information and to help them to arrive at the right buying decision.

The remainder of this paper is organized as follows. First, we review the related literature and propose research hypotheses and a research model. The next section introduces research methods encompassing data collection procedure, a sample, and measures. Then we present the results of empirical analysis that include reliability and validity tests, hypotheses tests, and interaction effects. In the following section, we discuss key findings of the study, offer academic and practical implications based on the findings, and suggest future research directions. Finally, we draw conclusions highlighting the importance of this research.

2. Theoretical Background and Study Hypotheses

In this section, we review related studies and present research hypotheses. First, we introduce the Heuristic-Systematic Model to understand the theoretical backbone of the present study.

2.1. Heuristic-Systematic Model

The primary objective of this study is to elucidate the effects of unusual buying circumstances on a consumer's evaluation and use of online reviews when making a purchase decision. The heuristic-systematic model (HSM) of information processing serves as the theoretical foundation of this study. Originally developed by Chaiken [18], this communication model is used to explain how an individual receives and processes persuasive messages. This study uses the HSM to provide a theoretical explanation of how a buyer chooses and processes online reviews in arriving at a purchase decision. The model encompasses two modes of information processing: heuristic processing and systematic processing. According to the HSM, motivation and ability play key roles in the choice between the two modes of processing.

Heuristic processing uses judgmental rules known as knowledge structures, which are learned and stored in memory [19]. This process involves the use of heuristics or the simplifying of decision rules to quickly assess the message's validity, thus requiring minimal cognitive effort on the part of the message recipient. People with limited time and ability to think carefully tend to engage in heuristic processing in order to form an attitude toward a message [18]. In doing so, they tend to rely on more accessible information—such as the source's identity—in judging the validity of the message. Heuristic processing does not seek optimization, and is likely to end up with what Herbert Simon calls a satisficing solution—that is, a solution that is satisfying but not optimal [20]. Therefore, heuristic processing typically produces less judgment confidence [21]. In general, heuristic processing is best suited to situations in which the message recipient lacks the motivation or ability to systematically process the information or when economic concerns like time and cost matter.

Meanwhile, systematic processing involves efforts to understand available information through careful attention, deep thinking, and intensive reasoning [21]. In addition to attempting to actively comprehend and evaluate the arguments of a message, individuals employing systematic processing will assess the validity of an argument in relation to the message's conclusion [18]. Accordingly, this process ultimately results in an informed evaluative judgment and/or decision [22] and greater confidence regarding the purchase decision [21]. However, the approach is often time-consuming because it demands cognitive effort. Systematic processing also requires that an individual possess adequate cognitive capacity and motivation to decide whether to accept the message [23].

2.2. Time Pressure and Purchase Uncertainty

The buying context comprises two elements: time pressure and purchase uncertainty. Time pressure is a critical element of the consumer context and influences a buying decision. Extant studies generally define time pressure as "a type of psychological stress that occurs when a person has less time available (real or perceived) than is necessary to complete a task or obtain a result" [24]. This study focuses on online reviews as a source of information, and defines time pressure as the extent to which a buyer perceives that they have less time available than necessary to complete an information search. In other words, this study adopts the concept of time pressure as perceived by a consumer rather than as measured by absolute standards. Consumers can also choose to focus on a main task while ignoring or filtering out everything else in what scholars have termed "a narrowing effect" [10]. In this regard, a buyer can make a wrong decision by relying solely on a few online reviews that capture their attention. Therefore, it is likely to involve the risk of loss.

Conceptually, purchase uncertainty—the other element of buying context—corresponds to what researchers call "pre-purchase uncertainty" [25] or "buyer uncertainty" [12]. Uncer-

tainty involves being unsure of or lacking confidence in something. Individuals experience uncertainty when they feel that they lack sufficient information to make accurate predictions [26]. According to Urbany et al. [12], pre-purchase buyer uncertainty comprises two dimensions: uncertainty regarding what is known about the alternatives (knowledge uncertainty) and uncertainty regarding which alternative to choose (choice uncertainty). In this study, purchase uncertainty is understood as being related to both knowledge and choice uncertainty. Accordingly, this study defines purchase uncertainty as "the extent to which a consumer perceives to be deficient in the knowledge needed to make a rational purchase choice" (e.g., brands and features available, choice criteria, which brand and model to choose, and where to shop). In that regard, purchase uncertainty is conceptually similar to unfamiliarity or inexperience [27].

2.3. Source and Message Attribute Dependence

Extant studies suggest that consumers tend to reduce uncertainty and perceived risk by seeking information about a potential purchase [28]. There are two information search strategies through which users can evaluate and choose online reviews regarding a product or service: source attribute dependence and message attribute dependence. This classification is theoretically rooted in the work of Chaiken [18], who argued that source cues and message argument characteristics play a role when the validity of a message is assessed by the message recipient. In browsing and selecting reviews for assistance in a buying decision, users focus on source attributes (e.g., the reviewer profile) or message quality attributes (e.g., content quality).

2.3.1. Source Attribute Dependence

In circumstances that make it difficult to search and process information systematically, users are typically less interested in the content of individual reviews and prefer using heuristics to access several key reviews. Based on the quick evaluation of these reviews, users gain a general picture of the pros and cons of a product or service. This study defines source attribute dependence as the extent to which a consumer willingly depends on the characteristics of a message source to choose reviews that they will take into consideration to make a buying decision. The characteristics of a message source in the e-WOM context include the reviewer's photo, nationality, badges, levels, and number of reviews posted. These characteristics likely represent heuristics that a user can use to limit the breadth and cognitive demand of the information search.

When making a choice under time pressure, consumers tend to accelerate the rate at which they search and process information [11,29]. An important way means of accelerating this process is filtering the information by focusing on more important attributes. As Dhar and Nowlis [11] note, time pressure increases the weight placed on more meaningful product features, thereby enabling the buyer to complete the information search task quickly. As such, the buyer will find it more efficient to use source cues such as the reviewer's reputation or message length in order to filter the reviews and quickly access a small set of key reviews. On the basis of the foregoing, this study proposes the following hypothesis:

Hypothesis 1 (H1). *Perceived time pressure is positively related to source attribute dependence.*

Extant studies show that pre-purchase uncertainty produces feelings of insecurity, motivating consumers to seek information in order to reduce this perceived uncertainty [14,30]. Buyer uncertainty regarding a purchase is conceptually linked to perceived risk because the buyer is unsure about the subjective product quality, as well as the probability and size of the resulting loss should the purchased product fail to meet the customer's needs [31]. While an information search may help lower an individual's perceived risk, the extensive and time-consuming search for and of product-related information typically results in high search costs. In developing a model of consumer information searches, Schmidt and

Spreng [32] found that perceived search cost negatively influences the motivation to search, resulting in a decrease in information search activity. Accordingly, the cognitive burden of information searching in the face of high uncertainty may lead consumers to choose a more economical search strategy. As noted earlier, consumers save time and reduce cost and effort by focusing on the characteristics of a source rather than its message when evaluating and choosing online reviews to consider when making a buying decision. Therefore, this study posits the following hypothesis:

Hypothesis 2 (H2). *Perceived purchase uncertainty is positively related to source attribute dependence.*

2.3.2. Message Attribute Dependence

In this research, message attribute dependence is defined as the extent which a consumer is willing to rely on the characteristics of message (or argument) quality in deciding which reviews to read. Some attentive buyers value message quality attributes such as two-sidedness and message valence when evaluating a pool of reviews. Such individuals tend to believe that reviews that are two-sided, objective, or relevant are more helpful for a buying decision and thus deserve more attention when seeking information [33]. These buyers are strongly motivated to seek out information and ultimately expand their product knowledge. They read, analyze, and make inferences from as many useful reviews as possible in order to familiarize themselves with the product or service. Under normal buying conditions—that is, with sufficient time for an information search and adequate product knowledge to perform that search—such users typically depend on one or more message quality attributes when conducting an information search. However, the effectiveness of performing a goal-directed search activity will likely diminish in unusual circumstances where consumers find it difficult to perform a normal search. Under time constraints, a buyer may experience 'perceptual narrowing' that make search infeasible, where they channel or tunnel their focus toward a main task and ignore or filter out certain cues [10,34]. Likewise, under severe purchase uncertainty, a buyer may have no idea of what and where to search for. Thus, the greater a buyer's perceived time constraint for or perceived uncertainty regarding the information search, the less dependent their search activity will be on logical message quality characteristics as evaluation criteria. In other words, there is an inverse relationship between perceived time pressure and dependence on message quality attributes and between perceived purchase uncertainty and dependence on message quality attributes.

For example, a buyer perceiving severe time constraints in making a buying decision is less likely to painstakingly screen and evaluate online reviews by focusing on message attributes such as objectivity and relevance. Rather, a buyer facing time pressure will adopt a shortcut approach to evaluating the reviews, thereby reducing the information processing burden. In other words, buyers facing time constraints tend to use heuristics to complete the information search more efficiently. In short, the greater a buyer's perceptions of time pressure, the less likely they are to rely on message characteristics, and the more likely they are to rely on source characteristics to keep the cognitive workload of information search to a minimum. On the basis of the foregoing, this study proposes the following hypothesis:

Hypothesis 3 (H3). *Perceived time pressure is negatively related to message attribute dependence.*

The same logic applies to situations of purchase uncertainty. Consumers who believe that they lack the necessary product knowledge will feel uncertain about the purchase to such an extent that it hinders sound buying decisions. Such consumers do not know what information is necessary or how to search for information, often losing motivation to search for product information as a result. Under uncertainty, they tend to be less involved in search and thus buy either from sellers they had personal experience with (loyalty effect) or from well-known sellers (brand effect) in the absence of experience [14,35]. As a systematic processing approach requires the cognitive ability and motivation to search [23], a heuristic

approach is more suitable for buyers with little ability and motivation to conduct a product information search. Therefore, this study proposes the following hypothesis:

Hypothesis 4 (H4). *Perceived purchase uncertainty is negatively related to message attribute dependence.*

2.4. Decision Perceptions

2.4.1. Self-Confidence

Bennett and Harrell [36] define confidence as "the buyer's confidence in his ability to judge or evaluate attributes of the brands." Buyers' beliefs regarding their ability to evaluate brands are likely formed by the amount of information they possess (i.e., their product knowledge). A lack of self-confidence may produce anxiety [28], which also results from high risk perceptions. Thus, a consumer perceiving a buying decision as high risk will likely experience low self-confidence due to anxiety. According to Locander and Hermann [28], a buyer's search for information to reduce purchase uncertainty and risk can enhance their self-confidence. As noted earlier, a buyer's dependence on source attributes indicates that they rely on heuristics in seeking relevant information, often accessing key online reviews to guide their evaluation of brands. Accordingly, this study expects a positive relationship between source attribute dependence and self-confidence. Therefore, this study proposes the following hypothesis:

Hypothesis 5 (H5). *Source attribute dependence is positively related to self-confidence.*

Likewise, focusing on message quality characteristics in scanning online reviews is an important means of seeking information regarding a buying choice. Buyers focus on message's argument quality attributes such as valence, objectivity, completeness, and accuracy in selecting and evaluating online reviews to help the systematic processing of purchase-related information [33,37]. In their empirical study, Laroche et al. [38] found that familiarity with a brand influences a consumer's confidence toward the brand, suggesting a positive relationship between product knowledge and self-confidence. In sum, better product knowledge facilitates greater consumer confidence in the buying decision [39]. Accordingly, this study suggests the following hypothesis:

Hypothesis 6 (H6). *Message attribute dependence is positively related to self-confidence.*

While the use of heuristics in seeking information related to a purchase may save the buyer time and effort, it has limited effectiveness in assuring the buyer that the relevant information will be carefully and systematically processed in the buying decision. As Chaiken & Ledgerwood [21] note, heuristic processing can occur even when people are not motivated and able to deliberately think about a topic. Besides, a simplified decision process driven by heuristics may lead to biases and hence reduced accuracy [40]. Therefore, a buyer heavily reliant on source characteristics (i.e., heuristics) to evaluate online reviews is typically less confident in their choice than those who rely on message characteristics. In other words, it is likely that the systematic processing of online reviews by focusing on message attributes prompts greater self-confidence in buyers. Accordingly, this study proposes the following hypothesis:

Hypothesis 7 (H7). *There is a more positive association between message attribute dependence and self-confidence than between source attribute dependence and self-confidence.*

2.4.2. Anticipated Satisfaction

In general, anticipated satisfaction refers to the satisfaction that a consumer expects regarding the outcome of a purchase before making a final choice [41]. Possessing information about upcoming experiences enhances people's expected satisfaction because it gives them a sense of personal control [42]. When anticipating satisfaction, a consumer

forms mental images about one or more options, eventually leading to the final buying choice [41]. Examining a car repair case, Grazin and Schelderup [43] found a positive relationship between self-confidence and anticipated satisfaction. Consumers who know how to resolve a given problem tend to expect more positive outcomes, including a higher level of satisfaction. For example, a computer-savvy buyer will anticipate higher satisfaction regarding the purchase of a new iPod device than a computer illiterate buyer. On the basis of the foregoing, this study proposes the following hypothesis:

Hypothesis 8 (H8). *Self-confidence is positively related to anticipated satisfaction.*

2.5. Interaction between Time Pressure and Purchase Uncertainty

An interaction effect can be understood as the simultaneous effect of two or more independent variables on at least one dependent variable in which their joint effect is significantly greater or less than the sum of the parts [44]. The two independent variables in this study—perceived time pressure and perceived purchase uncertainty—may interact with each other to influence either of the two dependent variables, namely, source attribute dependence and message attribute dependence. Two hypotheses can be developed on the basis of these interaction effects.

First, as suggested earlier, buyers facing perceived time constraints or purchase uncertainty will be less likely to engage in systematic processing and will thus rely on a heuristic information search strategy. Accordingly, when an individual faces both time constraints and purchase uncertainty—both limitations significantly hindering their ability to systematically process related information—we expect that the buyer's dependence on source attributes will be even stronger than when only one of these limitations is present. For instance, a consumer planning an overseas tour within a short timeframe and feeling relatively uncertain regarding the purchase of an adequate tour package will be significantly more inclined to use source information as a shortcut in processing online reviews. As there is no guarantee that they will be able to find the right reviews by evaluating them on the basis of content quality, the consumer will be motivated to seek information in a more efficient manner. An efficient information search can be attained via heuristics derived from source information, including the reviewer's photo, nationality, and badges. Accordingly, this study posits the following hypothesis:

Hypothesis 9 (H9). *Source attribute dependence will increase as the association between perceived time pressure and perceived purchase uncertainty increases.*

The interaction between the two independent variables can be expected to influence message attribute dependence in the same way. Chaiken and Maheswaran [22] argue that heuristic processing prevails in circumstances where motivation or capacity for effortful processing is low. This is because systematic processing is unlikely in such situations as a result of factors limiting cognitive capacity. A buyer perceiving both time pressure and purchase uncertainty simultaneously will have substantially less motivation and ability to systematically process and evaluate online reviews than those facing either time pressure or purchase uncertainty. In such circumstances, a buyer is primarily motivated to complete the information search efficiently and with minimal cognitive effort. Consequently, the buyer will be less reliant on the characteristics of online reviews in determining the argument quality. Accordingly, this study hypothesizes the following relationship:

Hypothesis 10 (H10). *As the association between perceived time pressure and perceived purchase uncertainty increases, message attribute dependence will decrease.*

On the basis of the theoretical background and proposed hypotheses, Figure 1 presents this study's research model.

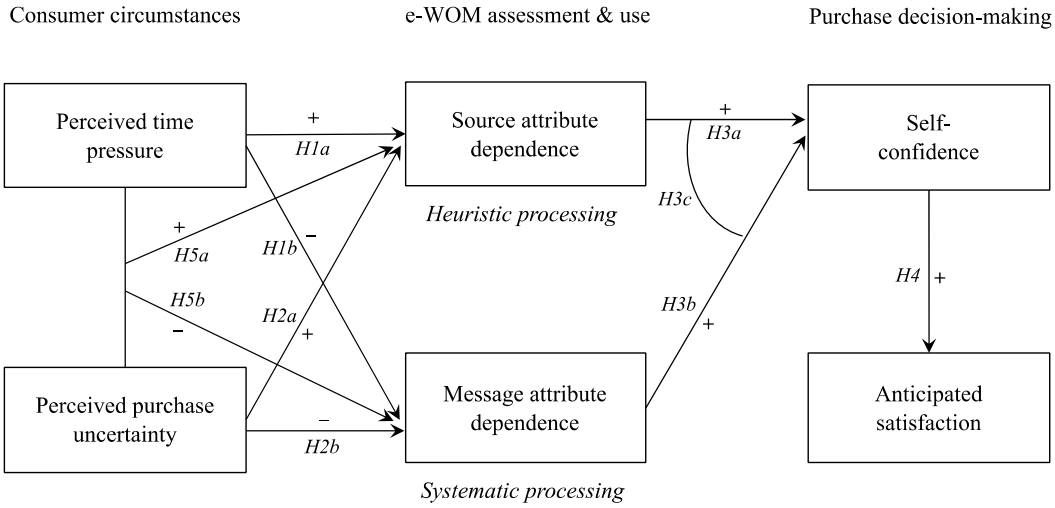


Figure 1. Research model.

3. Methodology

3.1. Data Collection and Sample

This study recruited a total of 560 individuals residing in the United States via Amazon Mechanical Turk in exchange for monetary compensation. The sample was confined to individuals who had prior experience of booking a hotel using a travel review website. Of the responses collected, 15 incomplete responses with missing information were excluded, resulting in a total of 545 responses used for data analysis. Among the participants, 65% were male (n = 354). With regard to age, 36.5% were between the ages of 20 and 29, 42.3% were between the ages of 30 and 39, 11.8% were between the ages of 40 and 49, 7.0% were between the ages of 50 and 59, and 2.4% were over 60.

We provided a hypothetical travel scenario that read "Please imagine that you are planning to make a vacation trip to an exotic island in Southeastern Asia that you have never visited and that the reservation should be made as soon as possible since you need to depart quite soon—just in a few days. In order to book a hotel room in your destination, you have visited one of your favorite travel websites such as Tripadvisor.com, Expedia.com, Kayak.com, HotelsCombined.com, etc. and are navigating through online reviews concerning potential hotels." After reading the scenario, participants were asked to answer questions regarding the extent to which they experienced time pressure, degree of purchase uncertainty regarding hotel choice, and the extent of their dependence on source attributes and message attributes. Thereafter, another scenario involving the choice of a specific hotel based on hotel reviews was presented to the participants: "You have finished going over the reviews on the hotels in your travel destination. You are now ready to book a hotel room based on the information that you have obtained through online reviews." Participants answered questions regarding their self-confidence and anticipated satisfaction associated with their booking decision.

This study included gender, income, and degree of experience in using reviews for booking hotels as control variables. With regard to the latter, participants were asked how regularly they use online reviews to book a hotel, with an average score of 4.84 (SD = 1.58) on a seven-point scale anchored with hardly–always. The average frequency of hotel reservations through the review website was about 8.60 times (SD = 12.32).

3.2. Measures

Table 1 lists the items used to measure six constructs: perceived time pressure, perceived purchase uncertainty, source attribute dependence, message attribute dependence, perceived confidence, and anticipated satisfaction. All measurement items were adapted from previous studies.

Table 1. Measures and scales.

Constructs	Variables	Measure Items	Sources
Perceived time pressure	PTP1	• I find myself pressed for time when I make a hotel reservation.	[45]
	PTP2	• I am in a hurry when I make a hotel reservation.	
	PTP3	• I only have a limited amount of time available in which to make a hotel reservation.	
	PTP4	• I try to finish making a hotel reservation as quickly as possible because I have other things to do.	
	PTP5	• I do not have enough time to complete my tour itinerary.	
Perceived purchase uncertainty	PPU1	• I am sure about the hotel room features that are available (-).	[12]
	PPU2	• I am sure about the pros and cons of the different hotel brands (-).	
	PPU3	• I am aware of the most important considerations when making a hotel reservation (-).	
	PPU4	• I am sure about which hotel brand to choose (-).	
Source attribute dependence		_____ is important to me when evaluating an online review to read.	[46,47] Self-developed
	SAD1	• The reviewer badge	
	SAD2	• The reviewer's rank in the community	
	SAD3	• The total amount of reviews contributed by the reviewer	
	SAD4	• The amount of helpfulness votes received by the reviewer	
	SAD5	• The number of followers a reviewer has	
	SAD6	• The identity disclosure of the reviewer (e.g., photo, nationality, etc.)	
Message attribute dependence		_____ is important to me when evaluating an online review to read.	[33,48] Self-developed
	MAD1	• The relevance of the review to my current needs	
	MAD2	• The completeness of the review	
	MAD3	• The review's ease of understandability	
	MAD4	• The objectivity of the review	
	MAD5	• The believability of the review	
	MAD6	• The timeliness of the review	
Self-confidence	PC1	• I am confident about selecting a hotel brand.	[49]
	PC2	• I am confident in my choice of hotel brand.	
	PC3	• I am confident about the evaluation of hotel brands.	
Anticipated satisfaction	AS1	• I will be satisfied with this booking decision.	[50]
	AS2	• I will be happy if I decide on a hotel.	

This study proposed two situational factors in an online shopping context: perceived time pressure and perceived purchase uncertainty. First, perceived time pressure refers to the extent to which a buyer perceives that they have less time available than is necessary to make a buying decision [51]. The five items used to measure time pressure were based on the work of Vermeir and Van Kenhove [45]. Second, perceived purchase uncertainty denotes the extent to which a consumer perceives that they lack the knowledge necessary to make a rational purchase decision. The four items used to measure perceived purchase uncertainty were adapted from Urbany et al. [12].

e-WOM evaluation and use comprises two constructs: source attribute dependence and message attribute dependence. Source (or message) attribute dependence is defined as the degree to which a consumer is willing to rely on the characteristics of a source (or message quality) attribute in deciding which reviews to read. The scale of dependence on source attributes used in this study is adapted from those developed by Banerjee et al. [46] and Jamil and Farid Hasnu [47]. Banerjee et al. [46] propose that online consumers often consider reviewer attributes like reviewer reputation, competence, and sociability,

while Jamil and Farid Hasnu [47] have developed messenger factors such as identity disclosure, reviewer reputation, and reviewer expertise. Likewise, the scale of dependence on message attributes is rooted in the review or message quality attributes, and measure items were adapted from Otterbacher [33] and Zhao et al. [48]. Otterbacher [33] proposed a multi-dimensional measure of message quality comprising the topical relevancy of the reviews, the ease of understanding the message, message believability, and objectivity. Zhao et al. [48] included specific scales in measuring review quality: namely, message adequacy, message depth, message reliability, message relevancy, message understandability, and message conciseness. The review characteristics proposed by Zhao et al. [48] were modified to fit this study.

Self-confidence and anticipated satisfaction are two constructs in purchase and decision-making. Self-confidence refers to the buyer's overall confidence in their ability to judge or evaluate brand attributes. The items used to measure self-confidence in this study are modified versions of those developed by Flavián et al. [49]. Anticipated satisfaction denotes the expected satisfaction of the purchase; this expectation is evaluated by consumers in making the final purchase decision. The items used to measure anticipated satisfaction in this study were adapted from Connors et al. [50]. Items were measured on a seven-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (7).

4. Results

4.1. Reliability and Validity Analysis

AMOS 21.0 was used to evaluate reliability and validity. Based on Hair [52], four specific indices were chosen to test the goodness of measurement model fit. In general, it is considered acceptable if the values of comparative fit index (CFI) and Tucker-Lewis index (TLI) are 0.9 or more, standardized root mean square residua (SRMR) is 0.05 or less, and root mean square error of approximation (RMSEA) is 0.08 or less. The results showed that the measurement model had adequate fit between observed data and the hypothesized model ($\chi^2/df = 2.123$; CFI = 0.964; TLI = 0.957; SRMR = 0.054; RMSEA = 0.045). These results indicate that the measurement model is acceptable according to conventional cutoff criteria [52,53]. Confirmatory factor analysis results revealed that all factor loadings were significant and above the threshold of 0.5 [52] after deleting three items of source attribute dependence (SAD 4, 6) and message attribute dependence (MAD 6) that were lower than 0.5. Reliability was tested using average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha. The commonly accepted cutoff value of AVE is 0.50 and that of CR and Cronbach's alpha is 0.7 [48].

Table 2 presents item scales for the constructs with factor loadings and convergent validity test values. The AVE values of the constructs ranged between 0.50 and 0.72, which are above the 0.5 cutoff value [54]. Ranging between 0.755 and 0.928, the CR indicated that constructs were highly stable and consistent. Moreover, all constructs had adequate construct reliabilities (Cronbach's $\alpha > 0.7$) [55]. As such, the scales have adequate construct validity.

Table 2. Statistics of construct items.

	Standardized Factor Loadings	Cronbach's Alpha	Composite Reliability	AVE	Mean (SD)
Perceived time pressure					
PTP1	0.939				
PTP2	0.926	0.925	0.928	0.724	3.682 (1.711)
PTP3	0.873				
PTP4	0.716				
PTP5	0.780				

Table 2. *Cont.*

	Standardized Factor Loadings	Cronbach's Alpha	Composite Reliability	AVE	Mean (SD)
Perceived purchase uncertainty					
PPU1	0.693	0.819	0.821	0.535	3.209 (1.214)
PPU2	0.779				
PPU3	0.729				
PPU4	0.722				
Source attribute dependence					
SAD1	0.823				
SAD2	0.885				
SAD3	0.734	0.867	0.870	0.627	4.382 (1.393)
SAD4					
SAD5	0.713				
SAD6					
Message attribute dependence					
MAD1	0.680				
MAD2	0.676				
MAD3	0.733	0.834	0.833	0.501	5.771 (0.989)
MAD4	0.686				
MAD5	0.759				
MAD6					
Self-confidence					
SC1	0.830				
SC2	0.841	0.874	0.876	0.702	5.208 (1.933)
SC3	0.842				
Anticipated satisfaction					
AS1	0.765	0.757	0.755	0.606	5.582 (1.045)
AS2	0.792				

In addition, this study tested the heterotrait–monotrait (HTMT) ratio of correlations to evaluate discriminant validity. Table 3 shows that discriminant validity has been satisfied because the HTMT ratios of correlation of all constructs are less than 0.85 [56,57]. Additionally, all square roots of each latent variable's AVE were larger than the correlation between the construct and the remaining constructs, confirming discriminant validity (Table 4). On the basis of these HTMT and correlation analysis results, convergent and discriminant validity are sufficient for this study's measurement model.

Table 3. Heterotrait-monotrait ratio results.

	PTP	PSU	SAD	MAD	SC	AS
PTP	1					
PSU	0.189	1				
SAD	0.365	−0.254	1			
MAD	0.027	−0.315	0.218	1		
SC	−0.116	−0.803	0.271	0.383	1	
AS	−0.209	−0.687	0.150	0.573	0.782	1

Notes. PTP = perceived time pressure; PSU = perceived purchase uncertainty; SAD = source attribute dependence; MAD = Message attribute dependence; SC = self-confidence; AS = Anticipated satisfaction.

Table 4. Correlation between constructs (AVE and squared correlations).

	PTP	PSU	SAD	MAD	SC	AS
PTP	**0.851**					
PSU	0.163	**0.731**				
SAD	0.332	−0.226	**0.792**			
MAD	0.024	−0.256	0.208	**0.708**		
SC	−0.104	−0.681	0.255	0.328	**0.838**	
AS	−0.174	−0.537	0.141	0.458	0.635	**0.778**

Notes. The bold numbers in the diagonal row are square roots of average variances extracted (AVE). PTP = perceived time pressure; PSU = perceived purchase uncertainty; SAD = source attribute dependence; MAD = Message attribute dependence; SC = self-confidence; AS = Anticipated satisfaction.

Finally, data were collected via a self-reporting questionnaire, which means that there is potential for common method bias. Thus, this study conducted Harman's single-factor test and multicollinearity test. Harman's single factor test revealed that the first factor explained 23.69%; this is below the 50% threshold and indicates that common method bias was not a concern [58,59]. Variation inflation factor (VIF) analysis showed that VIF values were between 1.472 and 4.156. Thus, multicollinearity is not a concern in the data because VIF values are less than the threshold of 10. This indicates that there is little overlap between the two variables.

4.2. Structural Paths and Hypothesis Tests

The structural equation model was tested using AMOS 21.0. The overall fit indices for the hypothesized model revealed a good model fit (χ^2/df = 2.221; CFI = 0.964; TLI = 0.957; RMSEA = 0.047, SRMR = 0.060) and satisfied suggested criteria [53]. Figure 2 presents the result of model testing.

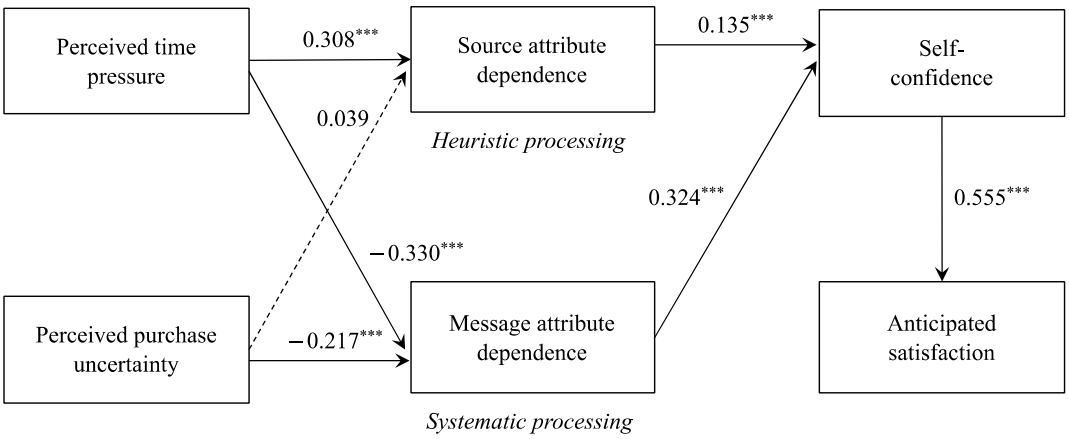


Figure 2. Hypothesis testing. Notes. X^2 = 479.669 (p = 0.000, df = 216); CFI = 0.964; TLI = 0.957; RMSEA = 0.047; SRMR = 0.060; *** $p < 0.001$.

Perceived time pressure had a significant positive effect on source attribute dependence (β = 0.308, $p < 0.001$) and was negatively associated with message attribute dependence (β = −0.330, $p < 0.001$), providing support for both H1 and H3. Furthermore, perceived purchase uncertainty (β = −0.217, $p < 0.001$) was found to have a significant negative effect on dependence on message attributes, while it had no significant effect on dependence on source attributes (β = 0.039, $p > 0.05$). Thus, H4 was supported, while H2 was not.

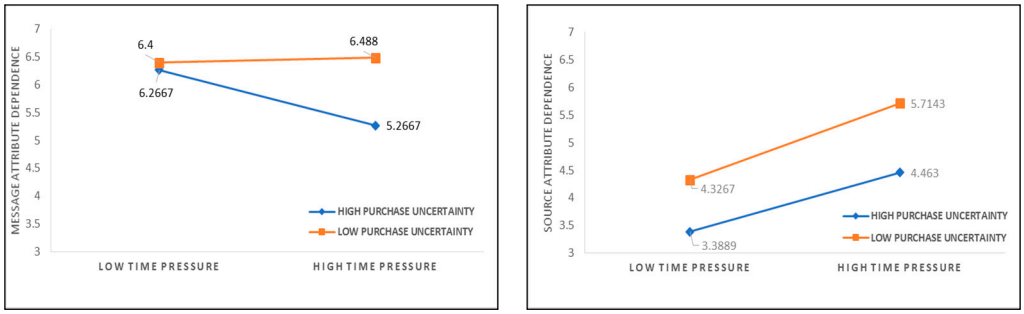
Moreover, results demonstrate that source attribute dependence (β = 0.135, $p < 0.001$) and message attribute dependence (β = 0.324, $p < 0.001$) were significantly associated

with consumers' self-confidence, supporting both H5 and H6. A pairwise parameter comparison test revealed that relative impact on self-confidence was much stronger for message attribute dependence than for source attribute dependence ($t = 3.192$, $p < 0.05$). Therefore, H7 was supported.

Finally, self-confidence had a positive direct effect on anticipated satisfaction ($\beta = 0.555$, $p < 0.001$), providing support for H8. Among the control variables, annual income and review usage are positively related to self-confidence.

4.3. Interaction Effects

The interaction effect of perceived time pressure and perceived purchase uncertainty on dependence on message attributes ($\beta = 0.568$, $p < 0.001$) was found to be significant. To illustrate the interaction effect, pre-search uncertainty was divided into a high-level group (one standard deviation above the mean) and a low-level group (one standard deviation below the mean). In Figure 3, two regression lines illustrate the relationship between time pressure and message attribute dependence when the extent of purchase uncertainty is either high or low. In other words, the purchase uncertainty moderated the relationship between time pressure and message attribute dependence. More specifically, the low time pressure group showed increased dependence on message attributes when consumers were under high purchase uncertainty ($\beta = 0.133$, $t = 3.973$, $p < 0.001$). However, there was no significant difference between the high and low time pressure groups in message attribute dependence when consumers were under low purchase uncertainty ($\beta = -0.039$, $t = -1.249$, $p = 0.212$). Meanwhile, the interaction effect of perceived time pressure and perceived purchase uncertainly on dependence on source attributes was not significant. Thus, H9 was supported, while H10 was not.



(**a**) (**b**)

Figure 3. The interaction effect of perceived time pressure and perceived purchase uncertainty. (**a**) Message attribute dependence, (**b**) Source attribute dependence.

Moderating effects were further examined using hierarchical regression. As Table 5 shows, the regression analysis results indicate that perceived purchase uncertainty moderated the relationship between perceived time pressure and message attribute dependence. Therefore, H10 was supported while H9 was not.

Table 5. Moderating effects of pre-search uncertainty with hierarchical regression for interaction (moderation) analysis.

Variables (Dependent Variable = MAD)	Model 1			Model 2			Model 3		
	B	**Beta**	**t**	**B**	**Beta**	**t**	**B**	**Beta**	**t**
Perceived time pressure	0.014	0.024	0.566	0.039	0.068	1.612	−0.180	−0.311	−3.011 **
Perceived purchase uncertainty				−0.217	−0.267	−6.362 ***	−0.489	−0.600	−6.457 ***
Perceived time pressure x Perceived purchase uncertainty							0.071	0.568	4.004 ***
R squared	0.001			0.070			0.097		
Adjusted R squared	−0.001			0.067			0.092		
R squared change	0.001			0.069			0.027		
F change	0.320 (0.572)			40.471 ***			16.029 ***		

Notes. *** $p < 0.001$, ** $p < 0.05$.

5. Discussion

5.1. Interpretation of Findings

Today, consumers increasingly rely on online review sites in seeking relevant information with which to evaluate product brands. Rational decision-making theory suggests that consumers gather and use relevant information from available sources in order to reduce potential risks and make optimal choices. However, if the buying decision is made in unusual circumstances such as time constraints or purchase uncertainty, the information search mode or strategy may change—effectively altering the way in which the buyer evaluates and employs online reviews. Addressing this issue, this study examined how consumers evaluate and utilize e-WOM in the face of time constraints and purchase uncertainty. This study's findings support most of its hypotheses.

First, results reveal that under high time pressure, respondents depended more on source attributes and less on message attributes in evaluating and using reviews to seek information regarding a potential purchase. These findings are consistent with the prediction that perceived time pressure induces reliance on shortcut cues or heuristics that enable individuals to search more efficiently while minimizing cognitive effort [60,61]. Likewise, results show that perceived purchase uncertainty significantly decreased buyers' dependence on message attributes. This suggests that consumers tend to rely less on message attributes when they feel that they lack the knowledge necessary to make a rational choice and thus perceive significant risk. However, the prediction that perceived purchase uncertainty is positively related to source attribute dependence was not verified by research results. In a high purchase–uncertainty situation, consumers may have hard time identifying their ultimate information needs and may not be capable of properly searching for the right information on the review site—regardless of whether the search is systematic or heuristic—because they are uninformed regarding online information gathering. Moreover, high product uncertainty has a negative influence on buyer satisfaction with online shopping [62]. Therefore, in order to address the uncertainty issue, consumers prefer relying on information from offline sources, such as seeking advice from an experienced acquaintance or contacting companies for customer support. This finding is consistent with that of Murray [63], who reported that high risk perceptions of a product increase the likelihood of a buyer seeking information through offline (rather than online) channels, despite the economic utility of online information.

Second, the interaction effect between perceived time pressure and purchase uncertainty on message attribute dependence was found to be negative, as hypothesized. When people faced both high time pressure and purchase uncertainty, their reliance on message attributes characterizing the content quality of online reviews decreased significantly. Consumers experiencing significant uncertainty are expected to lack the knowledge necessary

to seek information and thus lose the motivation to do so. If consumers already experiencing a decrease in motivation face severe time pressure, they may skip the rational search procedure altogether—the combination of constraints significantly discouraging their systematic evaluation of the argument quality of messages. However, the interaction effect between perceived time pressure and perceived purchase uncertainty on source attribute dependence was insignificant. This finding is inconsistent with this study's prediction that consumers under composite constraints will turn to heuristics (i.e., information about sources) for the same reasons that they would avoid in-depth cognitive processing of reviews at the message level. Arguably, respondents experiencing both severe time pressure and severe purchase uncertainty opt to seek information from offline sources or delay their buying decision to a later date. In such scenarios, buyers may determine that it is too risky to make a purchase decision, as an incompetent search can result in the wrong product choice.

Third, results show that while both source attribute dependence and message attribute dependence positively affect self-confidence, message attribute dependence has a significantly stronger impact. This indicates that respondents experienced higher self-confidence choosing between potential hotel brands when they systematically evaluated online reviews focusing on message characteristics than when they relied on heuristics for the quick evaluation of key online reviews. Extant studies have produced mixed findings regarding this relationship. For example, this study's results are in line with those of Mudambi and Schuff [64], who found that an in-depth review written by an assiduous reviewer fosters consumer confidence because such insightful reviews have diagnostic value in a buying decision. A survey of related studies indicates that product experience [65,66], prior knowledge [67], and beliefs regarding brand selection ability [68] are factors known to impact consumer confidence. Self-confidence in a consumer's choice is enhanced by abundant information [69,70]. More specifically, in-depth information helps reduce the search effort and thus search costs on the part of the buyer, making it easier to compare alternatives [71–73]. Consequently, consumers believe that this type of information has more diagnostic value in a product choice [74]. However, this study's findings contrast with those of Trumbo [75], who found that an individual's perception of risk is positively related to systematic processing but negatively related to heuristic processing. Risk perception tends to lower self-confidence. Trumbo's [75] findings imply that the more systematic a buyer's information search, the greater the risk and the weaker the self-confidence the buyer will perceive. This prompts the question of why systematic processing diminishes consumer self-confidence. Trumbo [75] explains that "those [respondents] who have most engaged the information . . . have arrived at the conclusion that there is something to be concerned about" [75]. Hence, it is expected that buyers who have performed an extensive information search may perceive a lower level of self-confidence because they will feel more vulnerable to the potential risks associated with a purchase while gaining more knowledge.

Finally, consumer self-confidence was found to positively influence the extent of satisfaction expected from the purchase decision. If consumers believe they can make a competent product choice based on the information they have obtained, they will anticipate positive outcomes regarding the future use of the product being purchased. Thus, the more a buyer understands the likely consequences of using the product or service, the higher their expected satisfaction [43]. This finding aligns with that of Hahn and Kim [76], who demonstrated that the perceived confidence of shopping at an online store was a significant predictor of a buyer's behavioral intention to transact. In short, a buyer confident in their shopping ability will be optimistic about the outcome of their product choice.

5.2. Implications

5.2.1. Academic Implications

First, although numerous studies have examined the effects of time pressure and purchase uncertainty on consumer behavior in general, few have considered the influence

of unusual buying circumstances on e-WOM evaluation and employment. As such, this study expands the existing literature on e-WOM by investigating how constraints on a consumer's time and information impact their e-WOM evaluation and utilization. This study is the first to apply Chaiken's [18] HSM to the e-WOM situation in order to make predictions about a buyer's information search behavior in the face of buying constraints. More specifically, this study uses the HSM to verify the assumption that, under circumstances limiting the ability to make a rational purchase, a buyer will tend to employ heuristics rather than a systematic information search to obtain information satisfying their buying needs quickly and easily.

Second, this study empirically tested the interaction effects of time pressure and purchase uncertainty upon a buyer's information search behavior, examining whether consumers' evaluation and use of online reviews are markedly different when the two constraints occur simultaneously. Results revealed that although consumers restrain their systematic information search—which may be cognitively demanding—when the constraining circumstances co-exist, they do not necessarily pursue a heuristic information search strategy. In this regard, this study is expected to contribute to the body of online consumer behavior literature by elucidating the intricate composite effects of buying constraints on the mode of information search.

Third, this study enriches our understanding of the theoretical underpinnings of the relationship between the mode of information search and self-confidence. Results confirm that while a buyer's information search—whether systematic or heuristic—increases their perceived self-confidence, a systematic search strategy (i.e., dependence on message attributes) has a greater impact on self-confidence than a heuristic search strategy (i.e., dependence on source attributes).

5.2.2. Implications for Business Practitioners

First, this study's findings provide some insights into how e-commerce firms can effectively increase customer satisfaction for buyers with varying degrees of time pressure and purchase uncertainty. Existing e-WOM studies generally assume that consumers make purchase decisions in an ideal buying situation with virtually no constraints in time or knowledge. However, consumers are often under various constraints, limiting their ability to seek information when making online purchases. Therefore, websites need to be designed to enable potential buyers from a specific buying context to effectively follow a path matching their information search, and thus facilitate their ability to efficiently evaluate and use e-WOM to seek information that fits their buying needs.

Second, e-commerce practitioners should implement a strategy to provide consumers with information tailored to unique consumer needs under varying constraints. People under severe time pressure or buyer uncertainty should have easy access to information regarding the sources of online reviews, while those under mild time constraints or purchase uncertainty should be directed to information regarding the content quality of individual review messages. In particular, consumers under composite constraints—such as severe time pressure and purchase uncertainty—are more inclined to seek information about message sources (i.e., heuristics) in order to minimize the cognitive effort required in processing individual reviews at the message quality level. Therefore, it is imperative to match information search functions built into the e-commerce system to the types of buying constraints, thereby enabling consumers to seek information satisfying a given buying circumstance. For example, provided that the system has determined that the buyer knows little about the tour destination and needs quick summary of positives and negatives, this can initiate the automatic review search to suggest an organized outline of relevant reviews based on message sources (e.g., ones composed by influential reviewers) that will end up saving the buyer much time and effort in reaching a buying decision. The implementation of such capabilities would importantly benefit from the AI technology that is known to make a substantial contribution to the intelligent information search functions.

Third, marketers should ensure that consumers find their review websites easy to access and that the provided information sources and/or messages are easy to use depending on their buying circumstance. Only when the review website successfully supports their information needs can consumers experience a high level of self-confidence in evaluating and choosing between potential product brands, elevating their anticipated satisfaction in the process. As the systematic processing of information has a greater impact on buyer's self-confidence than does heuristic processing, it is necessary to restructure a website's online reviews so that highly motivated and serious consumers can sort and search individual reviews effectively and efficiently.

5.3. Limitations and Future Research

This study has several limitations that can be addressed in future research. First, the study did not directly observe and gauge consumers' e-WOM evaluation and use behavior, or their purchase decision. Rather, it measured consumers' perceptions of e-WOM evaluation and employment by using a hypothetical travel scenario. Future research is needed to measure buyers' actual behavior in order to clearly verify the relationship between situational constraints, e-WOM evaluation and use, and purchase decision. Second, buyer uncertainty should be further divided into knowledge uncertainty and choice uncertainty as demonstrated by Urbany, Dickson [12], who used this division to investigate how each of these uncertainty dimensions affects the way in which a buyer evaluates and employs online reviews for information search. The results of such a study would provide insights into business strategies to alleviate potential customers' perceptions of purchase uncertainty. Third, this study did not fully control for the severity of consumers' time constraints and purchase uncertainty due to the nature of the research design. This study assumes that the degree of perceived time constraint or purchase uncertainty is neither objective nor absolute by nature, but is dependent on people's perceptions. Future studies should manipulate time constraint and purchase uncertainty by adopting an experimental design. Fourth, while this study assumes that the relationship between purchase uncertainty and source- or message-dependence is linear, this relationship may be non-monotonous. As such, future studies need to investigate this relationship for possible nonlinearity. Finally, this study only employed time pressure and purchase uncertainty as consumer constraints on buying. However, there may be other constraints that potentially limit consumers' use of reviews in different ways. Future studies should explore the influence of other constraints that may affect the evaluation and use of reviews by consumers, as well as examine the moderating role of other possible variables such as product classes or gender.

6. Conclusions

Today the information society is overloading individuals with a huge amount of information. Furthermore, people needing to buy over the Internet may face two critical constraints originating in the buying situation, time pressure and buying uncertainty, that would likely limit their ability to make the right purchase decision. We set out to undertake this research to verify whether consumers under these constraints will find it practically infeasible to apply a systematic decision process and employ a heuristic strategy instead. Our study results largely confirmed this prediction. It was found that these situational constraints are determinants of a buyer's mode of information processing, which subsequently influences self-confidence and anticipated satisfaction. The ability to make a right choice regarding the mode of information processing would ultimately augment users' ability to evaluate and use online reviews. Hence, to render a review website as attractive and valuable to potential users as possible, site owners should try enhancing the site design such that their website can help the users effectively deal with the situational constraints by providing adequate paths to the information sought by a buyer.

Author Contributions: Conceptualization, J.L. and I.B.H.; methodology, J.L. and I.B.H.; analysis, J.L.; writing—original draft preparation, J.L.; writing—review and editing, I.B.H. Both authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by National Research Foundation of Korea, grant number 2018S1A5A2A03039010. The APC was funded by National Research Foundation of Korea.

Institutional Review Board Statement: Ethical review and approval were waived for this study, due to data which is provided without any identifier or group of identifiers which would allow attribution of private information to an individual.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The authors confirm that the datasets analyzed during the study are available from the first author or the corresponding author upon reasonable request.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Lee, J.; Hong, I.B. Consumer's electronic word-of-mouth adoption: the trust transfer perspective. *Int. J. Electron. Commer.* **2019**, *23*, 595–627. [CrossRef]
2. Rosario, A.B.; de Valck, K.; Sotgiu, F. Conceptualizing the electronic word-of-mouth process: What we know and need to know about eWOM creation, exposure, and evaluation. *J. Acad. Mark. Sci.* **2020**, *48*, 422–448. [CrossRef]
3. Goyette, I.; Ricard, L.; Bergeron, J.; Marticotte, F. e-WOM Scale: Word-of-mouth measurement scale for e-services context. *Can. J. Adm. Sci. Rev. Can. Sci. l'Admin.* **2010**, *27*, 5–23. [CrossRef]
4. Ren, J.; Nickerson, J.V. Arousal, valence, and volume: How the influence of online review characteristics differs with respect to utilitarian and hedonic products. *Eur. J. Inf. Syst.* **2018**, *28*, 272–290. [CrossRef]
5. Burton, J.; Khammash, M. Why do people read reviews posted on consumer-opinion portals? *J. Mark. Manag.* **2010**, *26*, 230–255. [CrossRef]
6. Hicks, A.; Comp, S.; Horovitz, J.; Hovarter, M.; Miki, M.; Bevan, J.L. Why people use Yelcom: An exploration of uses and gratifications. *Comput. Hum. Behav.* **2012**, *28*, 2274–2279. [CrossRef]
7. Reyes-Menendez, A.; Saura, J.R.; Martinez-Navalon, J.G. The impact of e-WOM on hotels management reputation: exploring tripadvisor review credibility with the ELM model. *IEEE Access* **2019**, *7*, 68868–68877. [CrossRef]
8. Young, D.L.; Goodie, A.S.; Hall, D.B.; Wu, E. Decision making under time pressure, modeled in a prospect theory framework. *Organ. Behav. Hum. Decis. Process.* **2012**, *118*, 179–188. [CrossRef]
9. DeDonno, M.A.; Demaree, H.A. Perceived time pressure and the Iowa Gambling Task. *Judgm. Decis. Mak.* **2008**, *3*, 636–640.
10. Ariely, D. Time Pressure: Behavioral Science Considerations for Mobile Marketing; Think with Google, May 2016. Available online: https://www.thinkwithgoogle.com/marketing-strategies/app-and-mobile/time-pressure-behavioral-science-considerations-mobile-marketing. (accessed on 2 April 2021).
11. Dhar, R.; Nowlis, S.M. The effect of time pressure on consumer choice deferral. *J. Consum. Res.* **1999**, *25*, 369–384. [CrossRef]
12. Urbany, J.E.; Dickson, P.R.; Wilkie, W.L. Buyer uncertainty and information search. *J. Consum. Res.* **1989**, *16*, 208–215. [CrossRef]
13. Moorthy, S.; Ratchford, B.T.; Talukdar, D. Consumer information search revisited: theory and empirical analysis. *J. Consum. Res.* **1997**, *23*, 263–277. [CrossRef]
14. Korhonen, P.; Lauraëus, T.; Saarinen, T.; Öörni, A. *Uncertainty in Consumer Decisions*; Aalto University: Espoo, Finland, 2011.
15. Quintal, V.A.; Lee, J.A.; Soutar, G.N. Tourists' information search: The differential impact of risk and uncertainty avoidance. *Int. J. Tour. Res.* **2009**, *12*, 321–333. [CrossRef]
16. Reyes-Menendez, A.; Correia, M.; Matos, N.; Adap, C. Understanding online consumer behavior and eWOM strategies for sustainable business management in the tourism industry. *Sustainability* **2020**, *12*, 8972. [CrossRef]
17. Spenner, P.; Freeman, K. To keep your customers, keep it simple. *IEEE Eng. Manag. Rev.* **2013**, *41*, 67–72. [CrossRef]
18. Chaiken, S. Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *J. Personal. Soc. Psychol.* **1980**, *39*, 752. [CrossRef]
19. Chen, S.; Duckworth, K.; Chaiken, S. Motivated heuristic and systematic processing. *Psychol. Inq.* **1999**, *10*, 44–49. [CrossRef]
20. Simon, H.A. *Models of Man: Social and Rational*; John Wiley: New York, NY, USA, 1957.
21. Chaiken, S.; Ledgerwood, A. A theory of heuristic and systematic information processing. In *Handbook of Theories of Social Psychology*; Van Lange, P.A.M., Kruglanski, A.W., Higgins, E.T., Eds.; SAGE Publishing: Thousand Oaks, CA, USA, 2012; Volume 1, pp. 246–266.
22. Chaiken, S.; Maheswaran, D. Heuristic processing can bias systematic processing: Effects of source credibility, argument ambiguity, and task importance on attitude judgment. *J. Personal. Soc. Psychol.* **1994**, *66*, 460. [CrossRef]
23. Zuckerman, A.; Chaiken, S. A heuristic-systematic processing analysis of the effectiveness of product warning labels. *Psychol. Mark.* **1998**, *15*, 621–642. [CrossRef]

24. Phil, D. *What Is Time Pressure and Why Does It Matter?* Towerdata: New York, NY, USA, 2016.
25. Shulman, J.D.; Cunha, M.; Clair, J.K.S. Consumer uncertainty and purchase decision reversals: Theory and evidence. *Mark. Sci.* **2015**, *34*, 590–605. [CrossRef]
26. Milliken, F.J. Three types of perceived uncertainty about the environment: State, effect, and response uncertainty. *Acad. Manag. Rev.* **1987**, *12*, 133–143. [CrossRef]
27. March, R.; Woodside, A.G. *Tourism Behaviour: Travellers' Decisions and Actions*; Cabi: Wallingford, UK, 2005.
28. Locander, W.B.; Hermann, P.W. The effect of self-confidence and anxiety on information seeking in consumer risk reduction. *J. Mark. Res.* **1979**, *16*, 268–274. [CrossRef]
29. Zur, H.B.; Breznitz, S.J. The effect of time pressure on risky choice behavior. *Acta Psychol.* **1981**, *47*, 89–104.
30. Lauraeus-Niinivaara, T.; Saarinen, T.; Öörni, A. Knowledge and Choice Uncertainty Affect Consumer Search and Buying Behavior. In Proceedings of the 2007 40th Annual Hawaii International Conference on System Sciences (HICSS'07), Big Island, HI, USA, 3–6 January 2007; IEEE: New York, NY, USA, 2007.
31. Kim, Y.; Krishnan, R. On product-level uncertainty and online purchase behavior: An empirical analysis. *Manag. Sci.* **2015**, *61*, 2449–2467. [CrossRef]
32. Schmidt, J.B.; Spreng, R.A. A proposed model of external consumer information search. *J. Acad. Mark. Sci.* **1996**, *24*, 246–256. [CrossRef]
33. Otterbacher, J. 'Helpfulness' in online communities: A measure of message quality. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, Boston, MA, USA, 4–9 April 2009.
34. Lewkowicz, D.J.; Ghazanfar, A.A. The emergence of multisensory systems through perceptual narrowing. *Trends Cogn. Sci.* **2009**, *13*, 470–478. [CrossRef] [PubMed]
35. Brynjolfsson, E.; Smith, M.D. Frictionless commerce? A comparison of internet and conventional retailers. *Manag. Sci.* **2000**, *46*, 563–585. [CrossRef]
36. Bennett, P.D.; Harrell, G.D. The role of confidence in understanding and predicting buyers' attitudes and purchase intentions. *J. Consum. Res.* **1975**, *2*, 110–117. [CrossRef]
37. Chen, C.C.; Tseng, Y.-D. Quality evaluation of product reviews using an information quality framework. *Decis. Support Syst.* **2011**, *50*, 755–768. [CrossRef]
38. Laroche, M.; Kim, C.; Zhou, L. Brand familiarity and confidence as determinants of purchase intention: An empirical test in a multiple brand context. *J. Bus. Res.* **1996**, *37*, 115–120. [CrossRef]
39. Olsen, J.E.; Thompson, K.J.; Clarke, T. Consumer self-confidence in wine purchases. *Int. J. Wine Mark.* **2003**, *15*, 40–51. [CrossRef]
40. Tversky, A.; Kahneman, D. *Judgment under Uncertainty: Heuristics and Biases, in Oregon Research Institute Research Bulletin*; Office of Naval Research: Arlington, VA, USA, 1973.
41. Shiv, B.; Huber, J. The impact of anticipating satisfaction on consumer choice. *J. Consum. Res.* **2000**, *27*, 202–216. [CrossRef]
42. Franssens, S.; Botti, S. Consumers' Reliance on Imagination Moderates the Effect of Information on Anticipated Satisfaction. *ACR N. Am. Adv.* **2016**, *44*, 113–114.
43. Granzin, K.L.; Schjelderup, K.H. Situation as an influence on anticipated satisfaction. *ACR N. Am. Adv.* **1982**, *9*, 234–238.
44. Lavrakas, P.J. *Encyclopedia of Survey Research Methods*; SAGE Publications: Thousand Oaks, CA, USA, 2008.
45. Vermeir, I.; Van Kenhove, P. The influence of need for closure and perceived time pressure on search effort for price and promotional information in a grocery shopping context. *Psychol. Mark.* **2005**, *22*, 71–95. [CrossRef]
46. Banerjee, S.; Bhattacharyya, S.; Bose, I. Whose online reviews to trust? Understanding reviewer trustworthiness and its impact on business. *Decis. Support Syst.* **2017**, *96*, 17–26. [CrossRef]
47. Jamil, R.A.; Hasnu, S.A.F. Consumer's reliance on word of mouse: A review paper. *J. Bus. Econ.* **2013**, *5*, 171–205.
48. Zhao, K.; Stylianou, A.C.; Zheng, Y. Sources and impacts of social influence from online anonymous user reviews. *Inf. Manag.* **2018**, *55*, 16–30. [CrossRef]
49. Flavián, C.; Gurrea, R.; Orús, C. Choice confidence in the webrooming purchase process: The impact of online positive reviews and the motivation to touch. *J. Consum. Behav.* **2016**, *15*, 459–476. [CrossRef]
50. Connors, L.; Mudambi, S.M.; Schuff, D. Is It the Review or the Reviewer? a Multi-Method Approach to Determine the Antecedents of Online Review Helpfulness. In Proceedings of the 2011 44th Hawaii International Conference on System Sciences; Institute of Electrical and Electronics Engineers (IEEE), Kauai, HI, USA, 4–7 January 2011; IEEE: New York, NY, USA, 2011.
51. Herrington, J.D.; Capella, L.M. Shopper reactions to perceived time pressure. *Int. J. Retail. Distrib. Manag.* **1995**, *23*, 13–20. [CrossRef]
52. Kline, R.B. *Principles and Practice of Structural Equation Modeling*; Guilford Press: New York, NY, USA, 2015.
53. Hair, J.F. *Multivariate Data Analysis*, 7th ed.; Pearson: London, UK, 2010.
54. Fornell, C.R.; Larcker, D.F. Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **1981**, *18*, 39–50. [CrossRef]
55. Nunnally, J.C.; Bernstein, I. *Psychometric Theory*, 3rd ed.; McGraw-Hill: New York, NY, USA, 1994.
56. Henseler, J.; Ringle, C.M.; Sarstedt, M. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Mark. Sci.* **2015**, *43*, 115–135. [CrossRef]
57. Hwang, K.; Zhang, Q. Influence of parasocial relationship between digital celebrities and their followers on followers' purchase and electronic word-of-mouth intentions, and persuasion knowledge. *Comput. Hum. Behav.* **2018**, *87*, 155–173. [CrossRef]

58. Bautista, J.R.; Rosenthal, S.; Lin, T.T.; Theng, Y.L. Predictors and outcomes of nurses' use of smartphones for work purposes. *Comput. Hum. Behav.* **2018**, *84*, 360–374. [CrossRef]
59. Sheng, M.L.; Chien, I. Rethinking organizational learning orientation on radical and incremental innovation in high-tech firms. *J. Bus. Res.* **2016**, *69*, 2302–2308. [CrossRef]
60. Kaplan, M.F.; Wanshula, L.T.; Zanna, M. Time Pressure and Information Integration in Social Judgment. In *Time Pressure and Stress in Human Judgment and Decision Making*; Springer: Berlin, Germany, 1993; pp. 255–267.
61. Suri, R.; Monroe, K.B. The effects of time constraints on consumers' judgments of prices and products. *J. Consum. Res.* **2003**, *30*, 92–104. [CrossRef]
62. Luo, J.; Ba, S.; Zhang, H. The effectiveness of online shopping characteristics and well-designed websites on satisfaction. *MIS Q.* **2012**, *36*, 1131–1144. [CrossRef]
63. Murray, K.B. A test of services marketing theory: Consumer information acquisition activities. *J. Mark.* **1991**, *55*, 10–25. [CrossRef]
64. Mudambi, S.M.; Schuff, D. Research note: What makes a helpful online review? A study of customer reviews on amazon.com. *MIS Q.* **2010**, *34*, 185. [CrossRef]
65. Srinivasan, N.; Ratchford, B.T. An empirical test of a model of external search for automobiles. *J. Consum. Res.* **1991**, *18*, 233–242. [CrossRef]
66. Lee, B.-K.; Hong, J.-Y.; Lee, W.-N. How attitude toward the web site influences consumer brand choice and confidence while shopping online. *J. Comput. Commun.* **2006**, *9*, JCMC923. [CrossRef]
67. Huneke, M.E.; Cole, C.; Levin, I.P. How varying levels of knowledge and motivation affect search and confidence during consideration and choice. *Mark. Lett.* **2004**, *15*, 67–79. [CrossRef]
68. Duncan, C.; Olshavsky, R.W. External search: The role of consumer beliefs. *J. Mark. Res.* **1982**, *19*, 32–43. [CrossRef]
69. Oskamp, S. Overconfidence in case-study judgments. *J. Consult. Psychol.* **1965**, *29*, 261–265. [CrossRef] [PubMed]
70. Peterson, D.K.; Pitz, G.F. Confidence, uncertainty, and the use of information. *J. Exp. Psychol. Learn. Mem. Cogn.* **1988**, *14*, 85. [CrossRef]
71. Griffin, D.; Tversky, A. The weighing of evidence and the determinants of confidence. *Cogn. Psychol.* **1992**, *24*, 411–435. [CrossRef]
72. Tsai, C.I.; McGill, A.L. No Pain, No gain? How fluency and construal level affect consumer confidence. *J. Consum. Res.* **2011**, *37*, 807–821. [CrossRef]
73. Yoon, S.-O.; Simonson, I. Choice set configuration as a determinant of preference attribution and strength. *J. Consum. Res.* **2008**, *35*, 324–336. [CrossRef]
74. Lynch, J.G., Jr.; Marmorstein, H.; Weigold, M.F. Choices from sets including remembered brands: Use of recalled attributes and prior overall evaluations. *J. Consum. Res.* **1988**, *15*, 169–184. [CrossRef]
75. Trumbo, C.W. Information processing and risk perception: An adaptation of the heuristic-systematic model. *J. Commun.* **2002**, *52*, 367–382. [CrossRef]
76. Hahn, K.H.; Kim, J. The effect of offline brand trust and perceived internet confidence on online shopping intention in the integrated multi-channel context. *Int. J. Retail. Distrib. Manag.* **2009**, *37*, 126–141. [CrossRef]