A Research Model for Consumers’ Perception of Online Consumer Reviews

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2011
온라인 소비자 리뷰의 인식에 관한 연구 모델

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A thesis submitted to the faculty of KAIST in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Industrial and Systems Engineering. The study was conducted in accordance with Code of Research Ethics

2011. 5. 3
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온라인 소비자 리뷰의 인식에 관한 연구 모델

배 순 용

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ABSTRACT

The absence of the filtering process for information flow on the Internet caused consumers’ negative bias of online information, and it makes several consumers hesitate to adopt online information. Although it is important to resolve consumers’ concerns for online information, there are not enough studies about how to handle this kind of issue. For this purpose, this study suggests that it is necessary to understand how consumers perceive online information.

The first objective of this study is to develop a research model than can describe consumers’ perceptual process of online information. Important variables that are significantly related with perception of online information and how they influence consumers’ behavioral intention are identified in our research model. Through this procedure, our research model can delineate interrelationships among antecedents and consequences of perception of online information in terms of information credibility.

Our research model suggests that perception of information credibility can be affected by attributes of diverse variables which are connected with four antecedents such as source, message content, medium, and individual characteristics. Also, this study proposes trust and behavioral intention as consequences of perceived information credibility. Based on our research model, it is possible to figure out how online information can exert a meaningful effect on consumers’ behavioral intention.
The second objective of this study is to explain how consumers refer to online consumer reviews on their purchase decisions by applying our research model into the review context. We select reviews as the target information because they are the most widely used online information, as user generated content containing product information. Thus, reviews are appropriate online information in order to investigate consumers’ perception of online information. Also, considering the importance of reviews on the online shopping, it is crucial for online vendors to understand how consumers adopt reviews.

Online experiments were conducted to test if our research model can sufficiently describe how online consumer reviews influence consumers’ purchase intention with respect to review credibility. Results of the experiments show that only two factors among four antecedents, perception of reviewer and review content, can affect consumers’ judgment of reviews. It means that consumers assess credibility of reviews regardless of their own individual characteristics and website-related features. The findings of this study are consistent with prior research arguing that characteristics of information senders and message content delivered through information are important factors which can determine whether consumers adopt received information. First, features that can represent the excellence of reviewer such as reputation and expertise are important on review credibility. Second, consumers base their judgment of reviews on the degree of how well product information pertaining to review content explains details of target products. Third, higher level of perceived review credibility can help consumers form trusting belief towards a received review, and it encourages their purchase intention.

In addition, this study attempts to help online retailers who employ online consumer reviews to
reach consumers develop useful review strategies. Based on our research model and propositions of prior research about information processing, this study establishes a theoretical framework from which online retailers can obtain useful implications in terms of how to take advantages of reviews. Our framework suggests eight detailed review strategies, and while these strategies are best-suited to online vendors who interact with consumers through the Internet, we can expect that traditional retailers also can take helpful insights from our framework.

Keywords: Online consumer reviews, Information credibility, The Internet, Online shopping
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Chapter 1. Introduction

1.1 Research background

Today, consumers take advantages of information search on the Internet. The Internet helps consumers access information related with various topics more easily than ever before. Compared to the past time, consumers’ information search behavior changed a lot, and it is because they can get information with less cost and time. Also, the development of mobile Internet technologies is expected to provide more convenience information search environments to consumers. The ease of information search through the Internet has contributed to positive change of consumers’ life style.

One of the most important reasons why consumers can take lots of information on the Internet is due to the fact that not only experts but also general consumers can take part in creating information. Information from traditional media such as newspapers and books are managed by professional editors, and it is much the same for relatively new media like television and radio. In contrast to those information media where only experts can publish opinions, the Internet gives an opportunity to individual consumers to make their voices.

For example, blog has gotten considerable attentions as a new kind of online medium through which consumers can easily express their thoughts and feelings regardless of issues. Likewise, many consumers who share same interests are developing online communities to exchange information. While consumers just received information engendered by experts in the past, they are able to play an important role as a provider of information on the Internet nowadays. Thus, the growth of the
Internet as a huge information pool is owing to consumers’ participation in creating information.

1.2 Research motivation

Although one of the most important advantages of the Internet is its capacity for quickly and easily accessing information, it should be considered that this property of the Internet may make information search difficult. Consumers can encounter enormous information when they search for specific issues. It is not easy for consumers to make a decision whether to believe a piece of information they found on the Internet, among an amount of information that have different opinions about the same issue.

For instance, it becomes more serious when consumers refer to information related with purchasing behaviors that may cause a crucial damage for them. In this case, relying on wrong product information involves risk that can raise a negative consequence. It can be defined as an essential problem of a new medium called the Internet, and it may be due to the fact that the Internet has no government or ethical regulations to control the flow of information (Eastin 2001). Also, it is important for consumers seeking online information that traditional methods to discern information quality cannot work effectively on the Internet (Flanagin and Metzger 2000).

Consumers hardly evaluate quality of online information (Rieh 2002), and this is because they do not have appropriate criteria which can be used to determine whether information on the Internet is believable. Information source may be one of useful tools that consumers can rely on to overcome ambiguous situation of assessing information quality on the Internet because information from credible sources is perceived as credible. While there are several online sources which have authority
and expertise, most of online information is unqualified because their origins are uncertain.

Consumers cannot make sure whether information retrieved originates from recognized sources, and as a result, they have to individually access quality of information (Metzger 2007; Rieh and Danielson 2007). This may be the reason why consumers have hard times to take information on the Internet, although the Internet can allow them to access lots of information. The absence of criteria for assessing online information keeps consumers from getting high-quality information, and therefore, consumers’ perceived quality of online information decreases (Eysenbach 2000; Shon and Munson 1999). Consequently, abundant fraud and misinformation is being caused with the growth of the Internet (Flanagin and Metzger 2000).

Particularly, consumers’ participation in engendering online information can make the situation worse (Flanagin and Metzger 2000). Most consumers who publish information on the Internet do not have enough knowledge about an issue compared to experts. In contrast to conventional media where publishing process should go through quality assessment, almost all the consumers can quickly and easily publish their opinions on the Internet (Fink-Shamit and Bar-Ilan 2008). That is, while the authority of traditional sources can be easily confirmed, it may be difficult on the Internet because anyone can create information (Greer 2003; Metzger 2007; Rieh 2002).

In addition, although there are a large number of qualified information sources on the Internet, it is impossible for consumers to determine whether received information came from such sources. Online information cannot have a filtering process of professional gatekeepers which is possible for traditional publishing, and lacks authority indicators such as established reputation (Flanagin and Metzger 2000; Metzger 2007). Also, it is critical that the responsibility of information quality con-
trol shifts from professional gatekeepers to individual consumers (Metzger 2007). The unregulated flow of information makes it harder for consumers to distinguish more credible sources from less credible sources (Andie 1997). As a result, the absence of relative authority in online information sources makes online information be hardly assessed.

Many consumers begin to perceive online information as more skeptical (Fogg et al. 2001), and thus, how to evaluate information is more important than how to access information in today’s online environments (Wathen & Burkell 2002). Considering that consumers’ ultimate objective of information search behavior is to get information quickly and easily, it needs to organize constructs through which information quality can be efficiently ascertained. The Internet can hold its influence as a new medium only after consumers can satisfy consequences of its information search. The number of Internet users is increasing nowadays, and more information will be exchanged through the Internet. Therefore, an introduction of proper criteria to evaluate online information may be one of urgent Internet-related issues.

1.3 Research problem

Some consumers hesitate to adopt online information because it is difficult for them to evaluate quality of online information. It is important to help consumers easily assess online information to increase their perception of online information. For this purpose, it is necessary to confirm how consumers perceive online information. Understanding consumers’ perceptual process of online information contributes to their adoption of online information, and it also can help resolve consumers’ negative bias of online information. Thus, this study tries to analyze how consumers find and recog-
nize online information and how these procedures can influence their behavioral intention.

This study suggests a research model that can describe perceptual process of consumers from perception of online information to behavioral intention. This study needs to fulfill following two requirements to develop an appropriate research model. First, we should identify variables that are significantly associated with consumers’ perception of information because various variables can affect information adoption and behavioral intention. Second, our research model should set up proper relationships among the selected variables. This study establishes paths that can figure out how those variables interact with each other. By satisfying these two demands, we can explain how consumers refer to received online information on their behavioral intention.

While lots of studies have been implemented to explain consumers’ information search behaviors on the Internet, there are not enough research that are interested in how consumers perceive and adopt online information. The goal of this study is to develop a research model to delineate information processing procedure of consumers, and it can help understand consumer behavior on the Internet. Determinants of information adoption and their effects on behavioral intention will be examined from our research model. We expect to obtain important insights from our research model in terms of how to manage consumers’ perception of online information.

1.4 Research interest

Consumers who seek product information frequently rely on online consumer reviews. Online consumer reviews are product information that involves specific Internet-related features such as consumers’ participation in generating information. Consumers can come across online ads from sellers
who want to promote their products on the Internet. Also, Consumers are able to read recommendations of 3rd party reviewers who have the expertise and the authority about products from Internet media such as online magazines. While those kinds of information try to deal with the product in terms of sellers, online consumer reviews deliver consumer-oriented product information to consumers because they are written by previous consumers.

Online consumer reviews can be defined as one type of electronic word-of-mouth (eWOM) with respect to their being generated and diffused by consumers. Online consumer reviews may have stronger effect on consumers than traditional WOM because they are conveyed through the Internet. Although, consumers can make use of product information from online consumer reviews, lots of potential buyers hesitate to depend on online consumer reviews because they cannot make sure the credibility of reviews. Prior research examined several factors that might cause consumers’ lack of confidence in online consumer reviews.

First, most of online consumer reviews provide positive messages about the product (Chevalier and Mayzlin 2006; Dellarocas and Narayan 2006). If consumers can access only positive reviews without any criticisms, it would be difficult for them to accept those reviews. In particular, unnecessarily excessive positive reviews might leave consumers bad impressions about products. Chevalier and Mayzlin (2006) found that consumers perceive that online consumer reviews have positive bias compared to general population, and that the credibility of a positive review can be discounted by prospective buyers. Also, Hu et al. (2006) suggested that even highly-rated online consumer reviews cannot guarantee the quality of products.

Second, the lack of filtering process makes consumers keep away from depending on online con-
sumer reviews. Unlike traditional WOM, consumers cannot ascertain identity and credibility of those who post eWOM on the Internet (Cho and Huh 2008; Nakayama et al. 2010), and thus, it is more difficult for consumers to evaluate eWOM than WOM (Nakayama et al. 2010). Unlimited number of unknown consumers is participating in engendering eWOM, and consumers might be uncertain about the validity of unfiltered information on the Internet (Eysenbach 2000; Eysenbach et al. 2000; Shon and Musen 1999).

Also, it needs to consider that consumers of seeking product information on the Internet are more likely to contemplate the credibility of eWOM rather than traditional WOM (Wathen and Burkell 2002). Consumers began to suspect the motivations of unknown consumers who post eWOM (Cheung et al. 2009), and it can worry consumers of concerning the believability of the online consumer reviews (Pollach 2006). Accordingly, online retailers those who attempt to use online consumer reviews to reach consumers should develop appropriate ways to help consumers evaluate the credibility of reviews.

Third, consumers concern that online consumer reviews may be untrustworthy or biased (Schindler and Bickart 2005). Sellers can selectively filter online consumer reviews or disguise as consumers to generate and diffuse reviews (Schindler and Bickart 2005), and it causes consumers’ lack of confidence towards the reviews. Also, sellers can form online consumer reviews to promote their products in websites such as online forums and chat rooms where lots of information is shared among consumers (Godes and Mayzlin 2004; Godes and Mayzlin 2009; Mayzlin 2006). As a result, consumers are worried about whether reviews belong to fellow consumers or those who pretend to be fellow consumers (Schindler and Bickart 2005).
While prior research found that those ways of WOM strategy can be effective to increase product sales (Godes and Mayzlin 2004; Godes and Mayzlin 2009; Mayzlin 2006), they have to endure a huge risk when consumers become aware of their intentions. Several consumers cannot determine whether reviews are generated by fellow consumers, and thus, they hardly satisfied with the trustworthiness of reviews. Also, as abovementioned, overwhelmingly large number of positive reviews on the Internet makes consumers question credibility of reviews of whether they are written along with the purpose of sellers.

Those findings suggest several evidences for the reasons why consumers begin to doubt the credibility of online consumer reviews. While reviews are one of useful marketing tools to reach consumers, a lot more studies should be conducted to use them effectively. Considering that consumers might hesitate to refer to online consumer reviews on their purchase decisions, it needs to make consumers see online consumer reviews as credible product information. This is because credibility is the most important criteria for assessing information quality, and also, credibility has been a major concern for consumers of using eWOM (Cheung et al. 2009).

According to Cheung et al. (2009) and McKnight and Kacmar (2006), credibility is one of the most important antecedents that can determine not only consumers’ adoption of eWOM but also their behaviors. If consumers perceived level of credibility towards eWOM is high, they are more likely to have confidence in using online recommendations on their purchase decisions (Cheung et al. 2009; Nabi and Hendriks 2003). It means that credible reviews can influence consumers in the positive direction. Therefore, online retailers who try to use reviews to promote products via the Internet should concern how to increase the credibility of reviews, and it can intensify effects of
their fine tool, the online consumer review.

Today, many researchers are interested in the process by which consumers assess the credibility of online recommendation because a large number of consumers are relying on eWOM to search product information on the Internet (Hennig-Thurau and Walsh 2004). Considering that the evaluation of eWOM information is different from the evaluation of traditional WOM that can be obtained from friends or family (Cheung et al. 2009), it may be important to understand how consumers make judgment of online consumers reviews. In particular, this study focuses on determinants of consumers’ adoption of reviews in terms of their perceived credibility.

Surprisingly, to our knowledge, still there are not enough studies trying to identify factors that can contribute to credibility of online consumer reviews. In particular, considering that sellers can disguise as consumers to generate and deliver online consumer reviews through the Internet, they also are able to take advantage of providing consumers with credible reviews. That is, antecedents and consequences of the credibility of online consumer reviews are associated with the benefit of sellers who utilize reviews as a vehicle through which product recommendations can be conveyed to consumers. Findings of this study about how to engineer credible online consumer reviews can propose intriguing issues for sellers to overcome the phenomenon that consumers suspect the trustworthiness of reviews.

1.5 Research objectives

In this section, we suggest our research objectives, and how to achieve them will be discussed. Our first objective is to develop a research model to describe how consumers perceive online informa-
tion, and the second objective is to investigate whether the research model is adequate for our purpose in the context of online consumer reviews. Thus, we will propose detailed plans of how to develop and identify our research model.

First, we establish a research model that can clarify consumers’ perceptual process from information adoption to behavioral intention with respect to credibility. Our research model can be used to help understand how consumers utilize information on the Internet, and we will set up the research model through following two procedures.

Above all, this study will identify variables that can have strong roles on consumers’ perceived credibility of information. This study attempts to analyze antecedents and consequences of perceived information credibility. A research model of how consumers perceive and assess information credibility will be developed in this study. Also, whether perception of information credibility can positively influence consumers’ behavioral intention will be identified. Thus, this study confirms important variables connected with information credibility in order to develop our research model.

Next, this study will represent interrelationships among antecedents and consequences of information credibility. Our research model can figure out how information credibility is created from relationships among important variables. While prior research has analyzed the effect of individual variables on consumers, this study tries to integrate those variables into one simple structure and compare their influences. We can expect that a development of our research model can help understand meaningful connections among antecedents and consequences of information credibility.

Second, this study applies our research model into the context of online consumer reviews to understand consumer behavior of online information. This study considers diverse variables that can
influence consumers’ perception of online information and behavioral intentions. Our second objective is to identify whether our research model can explain consumers’ adoption of reviews and to confirm how review credibility can stimulate consumers to buy products on the Internet. Through this process, we can figure out how credible reviews are engineered and how consumers evaluate and refer to them.

In addition, there are several reasons why we select online consumer reviews as the target context. Plenty of consumers purchase products online, and they are familiar with product information exchanged on the Internet. Reviews are used to deliver product information on the online shopping environments. Consumers are interested in product information pertaining to reviews because product information is directly related with their benefit, and particularly, it is important that consumers regard reviews as one of the most useful product information. Also, we should take into account that reviews are user-generated content (UGC) published by general consumers. Many stakeholders on the Internet concern how to take advantages of UGC, and thus, lots of UGC services are being developed on numerous websites. Considering that UGC will play a more important role on the Internet, it is necessary to analyze how consumers perceive information contained in UGC in order to understand their online behaviors.

Therefore, applying our research model into the context of online consumer reviews has following implications. First, it is a considerable issue for the online shopping to identify consumers’ usage of reviews on their behavioral intention. Second, we can catch intriguing insights from our research model in terms of how to benefit from UGC by examining consumers’ perception of reviews. As a result, we can conclude that reviews are appropriate target information to investigate consumers’
adoption of online information.

1.6 Research design

In this section, we will discuss how to design our research in order to accomplish two objectives, and remaining parts of this study will be made up of following chapters. In Chapter 2, we develop a research model to delineate how consumers perceive online information. Variables that should be considered to generate credible information are selected from prior research, and their role on consumers’ perception of online information is examined through our research model. Lots of studies have paid attention to identify various features that can affect information adoption. Therefore, Potential antecedents and consequences from prior research on various fields including information system, psychology, marketing, advertising and computer science will be scrutinized for our research model.

Definition and role of online consumer reviews on the online shopping will be introduced in Chapter 3. We confirm how reviews contribute to the success of online shopping from previous studies, and thus, it will be postulated that our consideration of reviews as the target context is meaningful. This study contemplates how a research model can help increase consumers’ perception of review credibility, and we try to suggest that both of consumers and retailers can benefit from our findings.

In Chapter 4, this study will discuss why structural equation modeling (SEM) is a proper research tool to test our research model. First, characteristics of our research model will be introduced, and second, we will mention several requirements that should be fulfilled by a research tool to analyze our research model. We found that SEM can meet requirements of our research model and decide to
employ SEM to examine complicated interrelationships among multiple independent and dependent variables included in our research model.

How online experiments are conducted to obtain sample data is presented in Chapter 5. This study presents how participants, target websites, and target products are chosen, and the experimental procedure and efforts to reduce bias of the experiment will be discussed. Also, this study suggests the importance of cross validation, and how a follow-up test carried out to enhance the validity of our online experiments will be mentioned.

In Chapter 6, we show results of online experiments and introduce how SEM is used to analyze our research model. We follow suggestions of prior research to employ SEM and try to interpret the results depending on whether our results can satisfy recommended criteria from previous studies.

In Chapter 7, this study summarizes results of the experiments and discusses findings of our research model. Theoretical contributions will be suggested, and the importance of developing our research model that can explain perception of information, especially online consumer reviews, on the Internet is emphasized. Also, this study proposes several managerial implications in terms of how online retailers can benefit from reviews.

A theoretical framework for developing credible reviews is established from findings of our research model in Chapter 8. We try to help online vendors, who adopt reviews as an important marketing tool to reach consumers, improve their review strategies. This study incorporates information processing theories from prior research with results of our research model to suggest the theoretical framework from which useful review strategies can be developed.
Chapter 2. Research model

2.1 Importance of credibility on the Internet

Credibility is the most important criteria for assessing information quality (Fogg and Tseng 1999; Rieh 2002; Wathen and Burkell 2002). Fink-Shamit and Bar-Ilan (2008) suggested that credibility can function as a surrogate mechanism through which consumers can rely on to evaluate quality of information. Also, Wathen and Burkell (2002) argued that an offer of credible information is an essential requirement of a certain process which can affect consumers’ attitude and behavior. Consumers perceive credible information as trustworthy information with enough expertise. Conventional methods of assessing credibility are not feasible on the Internet, and this is because complex features, speed, sophisticated link structure and lack of referencing and organizational conventions of the Internet interrupt credibility evaluation of online information (Burbules 2001).

Credibility of an information source can be used as indicators to represent information credibility on the offline environment. Consumers can easily identify a publisher of the information, and it is possible for them to evaluate credibility of information based on the authority of the publisher. On the other hand, it is almost impossible to examine who create information and how they are delivered on the online environment. That is, consumers cannot easily judge credibility of online information based on credibility of information provider because responsibility of information flow is not clear on the Internet.

Credibility-related issues of online information become more significant when the Internet is regarded as a medium through which product information is conveyed. Consumers search product-
related information on the Internet to get enough knowledge of products before making purchase decisions. It should be considered that product information can influence consumers’ perception of online vendors and their attitude and behavioral intention towards products. This is because product information is directly associated with benefit and loss of consumers.

Credibility of product information is important for consumers since they cannot handle products on the online shopping environments (Dellarocas 2001). Online retailers need to offer consumers with highly credible information not only to increase product sales but also to develop long-term success of their online transactions. Also, Choi and Rifon (2002) suggested that building credibility on the Internet is an important factor for the success of Internet business, and offering credible product information may be challenges for online retailers. As a result, issue of credibility becomes more important on the online environment of these days (Chiagouris et al. 2008; Johnson and Kaye 1998; Johnson and Kaye 2000; Johnson and Kaye 2010).

Receivers’ judgment of message credibility was found to be an important determinant of message persuasion process (Sussman and Siegal 2003; Wathen and Burkell 2002). Providers of online information need to understand how consumers perceive credibility to engender credible information via the Internet. In addition, it is expected that online sellers can benefit from efforts to identify consumer behavior of searching and processing product information on the Internet.

2.2 Definition of credibility

The gap model suggested that differences between consumers’ expected service and perceived service, the actual performance, contribute to the evaluation of service quality (Parasuraman et al.
1985; Parasuraman et al. 1988; Zeithaml et al. 1988; Zeithaml et al. 1993), and Parasuraman et al. (1985) found that credibility is one of important determinants of perceived service quality. In particular, it is much easier for consumers to assess credibility than other determinants before receiving service because credibility includes high search properties (Parasuraman et al. 1985), and hence, it means that credibility can be used as useful cue to influence consumers’ perception of level of service quality.

Also, Kettinger and Lee (1995) examined that the gap model is able to be applied to figure out service quality in information system domain, and Zeithaml et al. (2002) used the gap model to understand how consumers perceive and evaluate website services. Therefore, credibility helps consumers easily evaluate service quality on the Internet because it is of higher search properties. Such findings suggested that credibility can be one of most frequently used criteria for consumers to assess service quality on the Internet. Consumers base their judgment of online information on credibility, and thus, credibility can play an important role on consumers’ adoption of online information. We can expect that an increase of perceived credibility can enhance consumers’ perception of online information.

Prior research defined credibility as believability, and it means that credible people are believable people (Fogg and Tseng 1999; Fogg et al. 2001; Tseng and Fogg 1999). According to those previous studies, a perceived quality does not reside in an object, a person, or a piece of information. A perceived quality is a matter of people’s perception, and it can be defined as a perception of credibility (Fogg and Tseng 1999; Fogg et al. 2001; Tseng and Fogg 1999). Credibility is one of the most important criteria that consumer can rely upon when they assess information quality. Therefore, it is
very important to find how to develop credibility to help consumers’ adoption of information.

Lots of research has been conducted to examine what factors can contribute to the formation of credibility on the Internet (Fogg and Tseng 1999; Fogg et al. 2001; Tseng and Fogg 1999). Credibility is thought to have multiple dimensions, and many ideas and concepts have been suggested. While there are disagreements among researchers about identification of factors, they commonly choose trustworthiness and expertise as the most important factors for credibility evaluation. According to prior research (Fogg and Tseng 1999; Fogg et al. 2001; Tseng and Fogg 1999), definition of those two concepts is as following: trustworthiness is defined by terms such as well-intentioned, truthful, unbiased, and so on. Perceived goodness or morality of a source is important to trustworthiness dimension of credibility. Expertise is defined by terms such as knowledgeable, experienced, competent, and so on. Perceived knowledge and skill of the source is important to expertise dimension of credibility.

Table 2.1 shows that there are various kinds of credibility. Fogg and Tseng (1999) and Tseng and Fogg (1999) classified credibility into four different types depending on when and how interactions between a perceiver and an object comes across. First, credibility evaluation may be different depending on whether a perceiver’s perception of an object is based on his subjective opinion or other’s thoughts. While an individual perception of a perceiver contributes to presumed credibility, perception of others contributes to reputed credibility. Second, how much information a perceiver gets about an object can determine perception of credibility. In comparison to a perceiver who has only a piece of information about an object, a perceiver with a large amount of information may make credibility towards an object in a different way. Third, when a perceiver evaluates an object based on
the first impression without any prior knowledge, surface credibility is formed. Fourth, in contrast, when a perceiver has enough knowledge and experiences about an object, experienced credibility is developed.

Table 2.1 Four types of credibility (Fogg and Tseng 1999; Tseng and Fogg 1999)

<table>
<thead>
<tr>
<th>Credibility</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presumed credibility</td>
<td>It describes how much the perceiver believes someone or something because of general assumptions in the perceiver’s mind.</td>
</tr>
<tr>
<td>Reputed credibility</td>
<td>It describes how much the perceiver believes someone or something because of what third parties have reported.</td>
</tr>
<tr>
<td>Surface credibility</td>
<td>It describes how much a perceiver believes someone or something based on simple inspection.</td>
</tr>
<tr>
<td>Experienced credibility</td>
<td>It describes how much a person believes someone or something based on first-hand experience.</td>
</tr>
</tbody>
</table>

Also, Fogg and Tseng (1999) noted that physical and psychological dimensions of perceived credibility should be considered at the same time to examine interactions among individuals and comput-
er-related technologies like the Internet. According to Fogg and Tseng (1999), people simultaneously evaluate various perspectives of computer-related technologies, and a person’s perceived credibility of an object is established through a sophisticated process but not from one or two simple ways.

Physical, a system perspective of credibility includes device credibility, interface credibility, functional credibility and information credibility. They are generated when individuals interact with computer-related technologies themselves, and can be explained in terms of hardware. On the other hand, a psychological perspective of credibility involves on-screen characters, computer qua computer, brand and expert creator. They are based on individuals' perception of internal process of computer-related technologies, and can be explained with respect to software. Table 2.2 represents a system perspective of credibility, and Table 2.3 represents a psychological perspective of credibility.

**Table 2.2** A system perspective of credibility (Fogg and Tseng 1999)

<table>
<thead>
<tr>
<th>Credibility</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device credibility</td>
<td>It relates to the physical aspect of the computing product.</td>
</tr>
<tr>
<td>Interface credibility</td>
<td>It relates to the display of the computer product as well as to the interaction experience.</td>
</tr>
<tr>
<td>Functional credibility</td>
<td>It relates to what a computer product does and how it is done.</td>
</tr>
<tr>
<td>Information credibility</td>
<td>It relates to how believable the information is from the computing product.</td>
</tr>
</tbody>
</table>
2.3 Credibility of online information

Uncertainty of the Internet makes consumers perceive that quality of online information is not high. This negative phenomenon is caused by two reasons. First, the absence of the authority in online information should be concerned. In contrast to traditional publishing, anyone can publish information through the anonymity of the Internet. Consumers cannot make sure whether information comes from believable sources. Second, information overload on the Internet may have a negative effect on how consumers deal with online information, and this situation can contribute to decreas-
ing consumers’ decision making quality on the Internet. Consequently, while consumers may benefit from a huge amount of information on the Internet, it becomes more difficult for consumers to determine information quality.

Consumers are more likely to perceive credible information as information with high quality, and hence, an increment of credibility can help consumers deal successfully with ambiguous situation of information search behavior on the Internet. It means that credibility should be developed in order to enhance consumers’ perceived quality of online information. Therefore, an analysis of factors influencing credibility evaluation is important for consumers. In particular, credibility is created from interactions among diverse factors, and includes different perspectives (Fogg and Tseng 1999; Fogg et al. 2001; Tseng and Fogg 1999).

Rieh (2002) proposed that consumers’ judgments are based on two basic criteria to make evaluations of information founded on the Internet: characteristics of information objects and characteristics of source of online information. First, characteristics of information objects include type of information object, its content, its presentation and its structure. Second, source characteristics that consumers concerned are about captured reputation and type of source. Thus, not only how to develop online information but also how to convey online information to receivers should be considered to increase credibility of information on the Internet. Figure 2.1 shows several ways information characteristics and source characteristics interact with information quality, cognitive authority, and judgment.
Fink-Shamit and Bar-Ilan (2008) defined four different evaluative components that can contribute to information quality assessment (Figure 2.2). It is found that consumers base their assessment of information quality on factors including credibility of site, credibility of content, predictive relevance and veracity assessment. The classification of Fink-Shamit and Bar-Ilan (2008) is somewhat similar to Rieh (2002) arguing that a judgment of online information may differ across how information is generated and delivered. Thus, from those studies, we can assume that content and source are important antecedents of consumers’ perception of online information.
Miller and Levine (1996) and Self (1996) found that not only features of source and message but also characteristics of information receiver are significantly related with consumers’ information assessment. Huerta and Ryan (2003) argued that receiver characteristics influence message credibility and persuasion process. It means that different consumers may interpret information of the same content from the same source in different ways. As a result, credibility of information is based on interactions of those factors such as source, message, and receiver characteristics (Miller and Levine 1996; Self 1996).

In addition, Walthen and Burkell (2002) suggested that a medium in which a message is presented can play an important role in assessing credibility. While a medium is a similar concept to source, there is a clear difference between them. A source can be defined as an information sender who generate and deliver information to receivers, and a medium can be defined as a channel where consumers can access and obtain information. For example, in an online community, a member who publishes an article would be a source, and the online community itself would be a medium.

Thus, there are four important factors that can influence consumers’ credibility evaluation: message, source, medium, and receiver characteristics (Figure 2.3). Definitions of them from prior research are as followings. First, message characteristics are related with the content and presentation of a message. Second, source characteristics are a function of who sends a message, and a source with trustworthiness and expertise can be perceived as credible by information receivers. Third, a

**Figure 2.2** The information quality assessment components (Fink-Shamit and Bar-Ilan 2008)
medium is a vehicle that allows consumers to access information, and medium characteristics, on the Internet, include features like type of website, type of browser, and interface. Lastly, receiver characteristics like personal involvement, personal responsibility, need for cognition, and familiarity with a topic can affect perception of information credibility.

![Figure 2.3 Antecedents of information credibility](image)

2.4 Research model

This study develops a research model from findings of prior research (Figure 2.4). While our research model adopts antecedents of information credibility proposed from previous studies, it confirms the role of detailed variables on consumers’ perception to improve a prior model. Also, in contrast to the prior model, our research model suggests consequences of information credibility, and through this procedure, we can describe how online information can influence consumers’ behavioral intention.
Thus, our research model identifies important variables which can influence consumers’ evaluation of information credibility. Also, it represents interrelations among antecedents and consequences of perceived credibility of online information. According to Figure 2.4, message, source, medium, and receiver characteristics contribute to perception of information credibility, and information credibility can enhance consumers’ trusting belief and behavioral intention. In the next section, we will discuss detailed procedures of how our research model is developed.

2.5 Antecedents of credibility

2.5.1 Message

Huerta and Ryan (2003) suggested that quality of message content can have positive impacts on
credibility of online information. First, perceived quality of message content is positively connected with evaluation of information. Message quality means that how message is presented to receivers, and this is one of most important determinants of consumers’ acceptance of message. Fogg et al. (2003) found that those variables which make up information content such as organization, breadth/depth, accuracy, bias, usefulness, and the tone and clarity of writing can contribute to perception of credibility. Also, Miller and Levine (1996) argued that credibility of a message can be influenced by strategies of information presentation. Therefore, how information is shown to consumers can be one of important determinants of credibility evaluation.

It was found that the wording involved in message content can be used as a cue to evaluate the validity of eWOM (Schindler and Bickart 2005). Ghose and Ipeirotis (2010) argued that the impact of an online consumer review on consumers’ perception would be greater for a review of reasonable length that is easy to read and lacks spelling and grammar errors than a review that is difficult to read and has errors. Also, Ghose and Ipeirotis (2010) suggested that the use of various cues to reveal review quality features is significantly associated with product sales of an online seller.

Second, we can assume that consumers’ perception of usefulness of online information can influence perceived information credibility. Davis (1989) found that users’ belief about the usefulness can determine their adoption intentions, and the role of perceived usefulness is important on task-related contexts with respect to one’s job performance (Davis 1989; Davis et al. 1989). Also, perceived usefulness can be used to measure individuals’ subjective performance of any generic task in non-organizational (Gefen et al. 2003). Information with usefulness can exert more persuasive influence on users’ judgment and choice processes (Feldman and Lynch 1988), and perceptions of
usefulness of received information can result in intentions towards adoption the information (Sussman and Siegal 2003). Thus, if consumers feel that online information is useful, they are more likely to evaluate it as credible information.

Perception of review usefulness can play important role on how consumers refer to a review on their behavioral intention. According to Ghose and Ipeirotis (2010), if consumers perceive that a reviewer has written many useful reviews, their perceived helpfulness of a review from the reviewer will increase (Ghose and Ipeirotis 2010). This is because consumers expect that the reviewer can provide them with useful product information. Therefore, a reviewer’s ability to guarantee the usefulness of a review has a strong effect on consumers’ perception of the review. In other words, review usefulness is one of important determinants of consumers’ perceived review credibility.

Third, consumers’ credibility judgment of online information may be different depending on the content that message contains. Prior research found that how information is related with consumers’ idiosyncratic tastes has meaningful impacts on their credibility evaluation of information. Fink-Shamit and Bar-Ilan (2008) and Shamdasani et al. (2001) suggested that consumers’ ability to process information can be different across the relevancy of information. It was found that irrelevant information results in limited processing effort, inferior recall, and less favorable attitudes than relevant information (Choi and Rifon 2002; Shamdasani et al. 2001). In other words, consumers’ cognitive capacity to easily process information is significantly affected by whether information is relevant to consumers.

The match-up hypothesis can be used to explain those relationships among consumers’ perception and information relevancy. According to the theory, the relevancy among product and advertising
can moderate the effects of spokesperson’s physical attractiveness (Friedman and Friedman 1979; Kahle and Homer 1985; Kamins 1990; Kamins and Gupta 1994; Koernig and Page 2002; Lynch and Schuler 1994; Till and Busler 2000). By manipulating the social and cultural contexts, an effective match can exist not only between a spokesperson and the message but also between a spokesperson and a product (Kahle and Homer 1985). It means that how consumers consume online information can be affected by the relevance of information.

Thus, we can expect that the relevance among a product and a review has strong impacts on consumers’ perception of review credibility. This study applies the match-up theory into consumers’ evaluation of an online consumer review, and suggests that the congruence between a review and a product can contribute to consumers’ perception of review credibility. That is, the more a review is in accordance with a product, the greater the effect of the review on consumers would be. Also, if consumers can obtain sufficient information about product details from a review, they tend to refer the review on their purchase decision of a product. Therefore, a credible review can be defined as a review which is highly relevant to the product.

2.5.2 Source

Information receiver’s recognition about an information sender can affect consumption of message (Harkins and Petty 1987; Kelman 1961; Reingen and Kernan 1993). It was also found that source credibility can affect consumers’ persuasion and online information search behavior (Eastin 2001; Harmon and Coney 1982; Lafferty and Goldsmith 1999; Sternthal et al. 1978). Lim et al. (2006) proposed that the influence of source credibility can be applied into the context of online environ-
ment, and source effect can bring an enormous impact on consumers’ evaluation of information (DeShields et al. 1996; Senecal and Nantel 2004; Sundar 1996; Sundar 1998; Wilson and Sherrell 1993). Consequently, information from a credible source has a more positive influence on consumers’ attitude and behavioral intention on the Internet.

Features of a recommender are one of the most important signals, and consumers can rely upon them to determine whether to utilize recommendations from previous consumers as decision aids. Smith et al. (2005) found that consumers can use these cues as foundations for judgment of peer reviewers. If peer reviewer characteristics can give positive impressions to consumers, consumers will attempt to refer to those recommendations on their decision making. Therefore, online sellers attempt to develop various ways to help consumers identify characteristics of information senders. For example, several vendors have introduced the feedback system to help consumers compensate for some of the ambiguity that typically characterizes the online experiences (Smith et al. 2005).

First, Fogg et al. (2003) suggested that consumers’ credibility judgments are affected by reputation of source. An ability to accumulate and manipulate good reputation depends on the assessment of external parties (Standifird 2001). Thus, the fact that an information sender has well established reputation means that contributions of a sender have enough quality that deserves to be respected by receivers (Fogg et al. 2003). Also, we can assume that information from a source with good reputation is perceived as more credible by consumers in comparison with information from a source without reputation.

A reviewer’s reputation is one of the most salient and frequently used cues to convey reviewer’s credibility information because reputation is founded upon evaluations of other eWOM users
Hu et al. (2008) argued reviewers with better reputation can help consumers decrease their perceived ambiguity about product quality on the Internet. Good reputation can contribute to reducing consumers’ behavioral uncertainty and decreasing transaction costs (Hu et al. 2008), and thus, well-known reviewers can influence consumers more than those reviewers who are not famous. In other words, consumers do not accept reviews from lower quality reviewers because they may perceive that no reputation means reviewers’ insufficiency to write high quality reviews (Hu et al. 2008).

Second, consumers evaluate credibility of an information sender based on whether the sender has enough expertise about a target issue delivered by received information. The expertise is an important determinant of source credibility (Hovland et al. 1953), and thus, expertise of a sender can have a strong role on a receiver’s judgment of the sender. Also, consumers are more likely to be influenced by information from expert sources rather than by non-expert ones for decision making (Gilly et al. 1998). Consumers use expertise of an information sender as a helpful signal that can guarantee information credibility, and if consumers feel that an information source has sufficient expertise, they can have more confidence in information received from the source.

Therefore, expertise of a peer reviewer can be one of crucial determinants of review credibility. Consumers can judge whether product information is credible based on expertise of a reviewer because expertise can contribute to consumers’ trusting belief (Smith et al. 2005). Also, De Bruyn and Lilien (2008) argued expertise can have a strong role in WOM communication context. Perceived expertise of reviewer can be used as a cue that guarantees credibility of an online consumer review because expertise can lead to the formation of credibility. It means that perceived expertise of a re-
viewer can help consumers adopt a review from the reviewer on their behavioral intention.

Third, Eagly et al. (1978) suggested that persuasiveness of message and opinion change on consumers would be different depending on how they infer motivation of source. It means that consumers’ causal inference about bias of a communicator can influence how consumers handle information from a source (Eagly et al. 1978; Fogg et al. 2003; Folkes 1988). Attribution theory suggests that a consumer's attributions concerning why a communicator takes a particular position in message has an important impact on whether the consumer accepts or rejects the message (Gotlieb and Sarel 1991). That is, understanding the reason why an information sender offers the information is important for consumers. Consumers purchase products and services because they infer a causal relationship between a product and the benefit from it (Folkes 1988; Kamins and Assael 1987), and thus, consumers base their attitudinal and behavioral intentions on making of causal inferences.

Thus, the reason why a reviewer generates a review can influence consumers’ perception of the reviewer. According to the attribution theory, consumers judge whether to use an online consumer review based on the casual inferences of a reviewer’s motivation in posting reviews (Sen and Lerman 2007). There are two kinds of motivation that make reviewers write online consumer reviews, external reasons and internal reasons. This classification is based on whether a reviewer tries to deliver information about products or want to talk about themselves. According to Sen and Lerman (2007), if consumers perceive that a review is based on external and product reasons, they will consider it is useful and believable. In contrast, if consumers perceive that the review is based on internal/reviewer reasons, they will discount it.

Fourth, individuals have a tendency to like, understand, pay attention to those who are similar to
themselves (Moss et al. 2007). Brown and Reingen (1987) argued that attitudinal and lifestyle similarity between a source and a target can play an important role in a receiver’s accepting opinions. Perceived similarity between an information receiver and a sender is found to positively influence the receiver’s information judgment. In WOM situation, perceived similarity can be defined as the extent to which a WOM receiver feel that a WOM sender have same interests and characteristics with her (Doney and Cannon 1997; Walczuch et al. 2001). Also, perceived similarity is important because it can enhance trust of a WOM receiver towards a WOM sender (Gorenflo and Gorenflo 1997; Walczuch et al. 2001).

Prior research introduced the concept called the tie strength to further explain this phenomenon. According to Granovetter (1973), the strength of an interpersonal tie is a “combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services that characterize the tie”. The stronger the tie would be, the more an information receiver recognizes that there is an intense emotional bond among her and an information sender.

Brown and Reingen (1987) found that tie strength can affect interpersonal relationships. In particular, tie strength is one of the most significant factors explaining the influence of WOM communications (Brown and Reingen 1987). WOM from strong tie sources can be perceived as more influential than that from weak tie sources. This is due to the fact that consumers may perceive that strong tie is more similar to them than weak tie. Also, consumers expect to obtain more useful information from strong ties because consumers feel that strong tie knows very well about them. Thus, consumers’ perceived credibility would be greater for information from strong tie than that from weak tie.

Therefore, consumers’ perceived rapport of a reviewer may have crucial impacts on their evalua-
tion of a reviewer. According to Smith et al. (2005), rapport refers to “the affective bond that an individual may feel toward another person, generally arising from shared preferences, tastes, and lifestyles”. In realm of online shopping where credible, meaningful relationship is lacking, consumers should communicate strangers who they do not have previous interactions (Smith et al. 2005). In the online environments, consumers may base their judgment of recommendation on perceived similarity as well as rapport that they share with peer recommenders (Simonset et al. 1970; Woodside and Davenport 1974). In order to form such rapport, consumers can rely on information cues in profiles of a peer reviewer (Smith et al. 2005), and a close or similar source might have a greater influence on consumers rather than an expert source under some circumstances such as online shopping (Gilly et al., 1998). Also, Smith et al. (2005) found that consumers are more likely to seek recommendations from a close or similar source, especially when they need product related information.

In addition, perceived credibility of a reviewer can influence perceived credibility of a review. Consumers are more likely to accept information when it is delivered from a highly credible source rather than when a source is believed to have lower level of credibility (Grewal et al. 1994). It was found that consumers’ perceived credibility of online consumer reviews are significantly affected by source credibility (Cheung et al. 2009). Forman et al. (2008) suggested that consumers’ response to a review can be influenced by perceived attributes of a reviewer. Thus, disclosure of a reviewer profile can contribute to increasing product sales (Forman et al. 2008). In addition, Ghose and Ipeirotis (2010) pointed out that consumers will base their decision whether to use a review on historical profile information of a reviewer. If consumers feel that a reviewer is of high credibility to deserve their trusting belief, they may accept a review from the reviewer as credible product information.
2.5.3 Medium

Besides features related with source and message content, medium that information is delivered should be considered to examine consumers’ perception of online information. Shamdasani et al. (2001) found that different media vehicles can have different communication effects on the same audience with the same messages. The website is the most frequently used medium on the online environments for information-related activities. Because of low entry barriers and lack of gatekeepers on the Internet, consumers cannot make sure whether they can get credible information from the website they are visiting (Shamdasani et al. 2001). If consumers can perceive a website to be of high quality, information from the website also would be perceived of high quality by consumers.

First, consumers are more likely to accept well-established and reputable websites than unknown sites (Shamdasani et al. 2001; Yoon 2002). Fellow consumers’ opinions arguing that interactions with a certain website were a good experience can alleviate consumers’ perceptions of risk and insecurity in interacting with the website (McKnight et al. 2002b), and this is because consumers use reputation as a crucial cue that they can rely upon to decrease their perceived risk of the uncertainty of the Internet. Therefore, a website should try to obtain trustworthy recognition to become an effective site because consumers tend to identify the name of a website rather than the company name (Yoon 2002).

Considering that reputation of a website is engendered from past experience of consumers (Akerlof 1970; Resnick et al. 2006), well established reputation can reflect positive experiences of previous consumers. Thus, consumers are more likely to seek information from established website rather
than nameless website because reputation can help consumers make trusting belief towards a website and lead to increased credibility (Ganesan 1994; Jarvenpaa et al. 2000). Also, Huerta and Ryan (2003) found that website reputation can contribute to credibility of online information, and, thus, if a website with good reputation has a fine information presentation, consumers may perceive information from that website to be credible.

Second, McKnight et al. (2002b) suggested that the interface of a website becomes the online storefront where first impressions of consumers towards an online vendor are formed because the vendor is faceless on the Internet. Improving these factors can help boost consumers’ beliefs about vendor competence, benevolence, and integrity (McKnight et al. 2002b), and it can increase consumers’ attitude towards a vendor as well as purchase intention (Hausman and Siekpeb 2009; Yoon 2002). Also, Chen and Dhillon (2003) proposed that professional look of a website have positive effects on consumers in the context of e-commerce.

Most of online retailers do not have offline presence to offer consumers products and services, and hence, their only way to interact with consumers is to utilize their websites (Chen and Dhillon 2003). According to Fogg et al. (2003), website design and presentational elements are the most frequently used criteria for consumers to evaluate a website. This is because consumers’ recognition and behavioral intention can be encouraged or discouraged by website’s appearance and structure (Chen and Dhillon 2003). Website presentation includes visual design elements like graphics and readability of a website as well as interface-related factors such as navigability and functionality (Fogg et al. 2003).

McKnight et al. (2002b) argued that website quality is an important variable that can positively
change consumers’ perception of a website. It was found that consumers’ positive recognition about website quality can help consumers make trusting belief towards competence, integrity, and benevolence of online vendors (McKnight et al. 2002b). It means that if consumers perceive a website to be of high quality, their behavioral intentions towards the website would be stimulated (McKnight et al. 2002b; Poddara et al. 2009). As a result, website quality can help consumers develop a willingness to rely on and interact with online sellers.

Third, consumers’ perception of familiarity towards the website can make consumers reduce their uncertainty and simplify their relationship with online retailers (Gefen 2000). Luhmann (1979) defined the concept of familiarity as “an understanding, often based on previous interactions, experiences, and learning of what, why, where and when others do what they do”. Consumers’ familiarity with a website enables them to be confident of security-related issues of an online retailer (Gefen 2000). Also, familiarity can help consumers to engender favorable behavioral expectations such as trusting belief towards a vendor (Luhmann 1979). If consumers get used to website features of an online vendor, they are more likely to judge it as credible medium.

Prior research found that website reputation, website quality, and website familiarity are major factors that can contribute to consumers’ confidence in website credibility. Park and Lee (2009b) found that credible website have greater effects on consumers rather than website with less credibility. Considering that a website is also a medium where consumers can read online consumer reviews, credibility of website may have meaningful impacts on consumers’ credibility evaluation of a review. Prior research investigated whether perception of website can influence how consumers recognize information quality (Kim and Niehm 2009; Lin and Lu 2000). We can assume that website
features can contribute to consumers’ perception of review credibility because they can help consumers form trusting belief and stimulate behavioral intention. Therefore, we propose that consumers’ perception of a website can be an important predictor of perceived credibility of a review from the website.

2.5.4 Receiver

While information from the same source contains the same content, consumers’ perception can be different across their individual characteristics. It means that different consumers can differently perceive how information is generated, conveyed, and presented to them.

First, Internet experience of consumers can influence their perception of online information. Cabezudo et al. (2008) suggested that consumers of having more experience with the Internet are more likely to value the offer of information than inexperienced ones. This is because consumers who skilled at the Internet and related-activities may have less perceived risk in using online information than novices. It means that the more Internet experience consumers have, the more value they put on online information. Therefore, consumers’ online experience can determine their evaluation of online information.

Shim and Drake (1990) found that consumers who have previous experience with other non-store shopping formats as well as prior experience of using computer-related technologies are more likely to shop online. Also, it was found that consumers’ purchasing behavior can be different depending on their experiences (Bettman and Park 1980).

Past purchase experiences through online shopping is found to be positively related with consum-
ers’ intention to use the Internet for their purchasing-related behaviors (Chen and Dhillon 2003; Liang and Huang 1998; Shim et al. 2001). It was found that more experience with the Internet are related to lower levels of perceived risk toward online shopping, which in turn results in consumers’ higher intentions to buy online (Miyazaki and Fernandez 2001). Likewise, previous experience can determine consumers’ initial and repeated purchase on the Internet (Hernández et al. 2010).

In addition, Goel and Prokopec (2009) found that consumers’ responses to an online consumer review can be different depending on whether they are skilled at online shopping. It means that how consumers induce product information from online consumer reviews may be different across their online shopping experiences. Thus, we can assume that consumers with sufficient online shopping experiences are more likely to adopt a review as credible product information compared to those who are inexperienced with online shopping.

Second, whether individuals have enough knowledge about the content of information is related to how they deal with the information. Adoni et al. (1984) suggested that when participants are knowledgeable about the subject matter, they are more likely to be affected by the message itself rather than a source.Maheswaran and Sternthal (1990) found that how consumers process information and make product judgment can be different across their knowledge. Similarly, consumers’ prior knowledge can exert significant influences on their information search and purchasing behavior (Bettman and Park 1980; Brucks 1985; Lee et al. 1999). Eastin (2001) noted that when receivers are highly knowledgeable, their ability and motivation to process the information become greater. Therefore, consumers with enough knowledge and expertise about the subject matter tend to be more susceptible to credibility evaluation.
According to prior studies, consumers’ information assessment can be affected by their interest and need for information. Tseng and Fogg (1999) found that it is possible for users’ need for information to contribute to consumers’ perceived credibility of online information. How consumers’ need influence their perception of information can be explained in terms of involvement. Consumers with high-involvement for information processing may deal with information in different ways compared to those who with low-involvement. Highly involved consumers are found to be more affected by information, and this is because they try to process information in more sophisticated way than low-involvement consumers.

Prior research identified that individuals’ motivation to understand and deal with information more carefully increases as their involvement in information processing increases (Lee et al. 2008; Park and Kim 2008; Park and Lee 2008; Park et al. 2007). Also, the level of involvement and prior knowledge are closely correlated, and thus, it may be difficult to distinguish the effect of those two factors (Brucks 1985; Celsi and Olson 1988; Sujan 1985).

Hence, consumers’ prior knowledge of a product determines whether they can base their purchase decision on online consumer reviews. This is because prior knowledge has a strong role on consumers’ capacity of information process (Cheung et al. 2009). Also, Park et al. (2007) argued that consumers’ prior knowledge of products should be considered to investigate how consumers use online reviews for purchase decision. We can expect that whether consumers have enough knowledge and expertise about products is closely associated with their assessment of a review.

How consumers process online consumer reviews can be different depending on their individual characteristics. Victor et al. (2009) noted that the way a review affects consumers may be influenced
by the way the review is presented to different types of consumers. Also, the context in which consumers judge a review can have an important effect on how consumers deal with the review (Yahia et al. 2008). It means that consumers’ individual features can affect their credibility evaluation of a received review.

2.6 Consequences of credibility

2.6.1 Trust on the Internet

Fogg and Tseng (1999) have argued that credibility can play an important role in users’ perceptions on the Internet. Credibility is important, especially on the Internet, because it contributes to the formation of consumers’ online trust. Rieh and Danielson (2007) argued that it needs to discuss credibility to refer to building of trusting behaviors. Credibility is an important determinant of trust, and trust depends on credibility (Cassell and Bickmore 2000; Corritore et al. 2003). Also, Corritore et al. (2003) defined credibility as a cue for trust, and Ganesan (1994) referred to credibility as one of important dimensions of the trust construct because credibility may be a positive signal of trustworthiness (Corritore et al. 2003). While trust is not the same as trustworthiness, there is a logical link between them (Corritore et al. 2003; Solomon and Flores 2001). Therefore, it needs to increase credibility of online information to make consumers trust the information.

Online trust can be defined as “an attitude of confident expectation in an online situation of risk that one’s vulnerabilities will not be exploited” (Corritore et al. 2003). For example, according to Chen and Dhillon (2003), trust means consumers’ perception of how reliable and dependable a vendor is. While trust can be used to mean credibility, it should be considered that trust and credibil-
ity are not the same concept, even if they are closely related each other (Fogg and Tseng 1999). To make the concept of these two terms clear, Fogg and Tseng (1999) argued that credibility means believability and trust is dependability. As a result, perceived credibility offers consumers a reason why they have to trust online information (Corritore et al. 2003).

While the concept of trust originates from relationships among individuals on the offline environment, interactions between individuals and technologies such as the website contribute to trust on the online environment (Corritore et al. 2003). Jian et al. (2000) found that there are no significant differences among trust-types including trust in human-human relationships, trust in human-machine relationships, and trust in general. This is because consumers try to form similar social and trusting relationships when they utilize technological artifacts as tools (Wang and Benbasat 2005).

Wang and Benbasat (2005) found that consumers have a tendency to perceive that technological artifacts involve human characteristics such as motivation, integrity, and personality. For example, while there is no physical interaction between a buyer and a seller (Yoon 2002), consumers can feel that the role of a website in online transactions is the same as that of a salesperson in offline transactions (Corritore et al. 2003). Table 2.4 shows that there are various kinds of trust, and Figure 2.5 presents an interdisciplinary model of different trust concepts.

**Table 2.4** Four types of trust (McKnight and Chervany 2003; Suh and Han 2002)

<table>
<thead>
<tr>
<th>Type of trust</th>
<th>Disposition to trust</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>It is the extent to which one displays a consistent tendency to be willing to depend on others</td>
</tr>
<tr>
<td>Institution-based trust</td>
<td>It is where one believes that the conditions conducive to situational success in an endeavor or aspect of one’s life are in place.</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Trusting belief</td>
<td>It is where one believes that the other party has one or more characteristics beneficial to oneself.</td>
</tr>
<tr>
<td>Trusting intention</td>
<td>It is where one is willing to depend on the other party even though one cannot control that party.</td>
</tr>
</tbody>
</table>
While the Internet provides both of a buyer and a seller with unique business environments, it raises serious issues associated with insecurity and privacy among transactions (Keen 1997). Consumers ask online sellers to create trust which is much stronger and more persistent than what is normally demanded offline, due to the perceived risk of negative consequences of online transactions (Keen 1997). Consumers’ concerns regarding unfair pricing, reliability of companies, conveying inaccurate information, the lack of a privacy policy, an unauthorized use of credit card information, and unauthorized tracking of transactions can make consumers stay away from online vendors (Gefen 2000; Reichheld and Schefter 2000). It is difficult for consumers to make sure whether an online vendor will deliver on its commitments (McKnight et al. 2002a; McKnight et al. 2002b; Yoon 2002).

According to Gefen (2000), “trust in a broad sense, is the confidence a person has in his or her favorable expectations of what other people will do, based, in many cases, on previous interactions.”, and thus, trust is the belief that others will behave as one expect and will not behave opportunistically by taking advantage of the situation (Gefen 2000; Gefen et al. 2003).

Trust can help consumers overcome their perception of negative consequences in online transactions (Mayer et al. 1995), and hence, maintaining consumers’ trust is a vital key to the success of online retailers (Reichheld and Schefter 2000). Wang and Benbasat (2005) suggested that the importance of trust is more emphasized in the online environments rather than in the offline environments. This is because no one can guaranty that online vendors will not engage in harmful opportunistic

Figure 2.5 An interdisciplinary model of high-level trust concepts (McKnight and Chervany 2003)
behaviors or that they will refrain from taking advantage of consumers and providing biased recommendations (Gefen 2000; Hu et al. 2008; Reichheld and Schefter 2000; Wang and Benbasat 2005). It is crucial to develop trusting relationships among online vendors and consumers to stimulate consumers to transact over websites (McKnight et al. 2002b). Therefore, understanding the nature and antecedents of trust in online transactions will help potential consumers transform themselves from curious observers to one who is willing to transact over websites (McKnight et al. 2002b).

Gefen (2000) argues that trust is one of the most effective among these complexity reduction methods, and it is also found that trust is crucial in buyer-seller relationships, specifically, in online transactions (Reichheld and Schefter 2000). Accordingly, without trust, consumers are not willing to make a deal with online vendors (Gefen 2000; Gefen et al. 2003). Despite of several differences among offline trust and online trust with regard to physical dimensions, in both cases, there is no disagreement in meaningful impacts of trust on consumers’ purchase decisions (Yoon 2002). According to Yoon (2002), online trust, like offline trust, can function as a facilitator to stimulate consumers’ positive purchase intention and repurchase decision. In particular, that is the reason why those new dot-com sites with no offline presence attempt to earn consumers’ trust as soon as possible by introducing new security technologies (Yoon 2002).

Trust is crucial to the success of online shopping (Corritore et al. 2003; Torkzadeh and Dhillon 2003), and this is because transactions among consumers and online retailers take place without physical contacts (Chen and Dhillon 2003). On the Internet, unlike in traditional offline business situations, primary interface where consumers can access an online seller is its website (Gefen et al.}
2003), and therefore, consumers are generally concerned of whether the seller is honesty and has enough competence to fill orders (Chen and Dhillon 2003; Keen 1997).

Keen (1997) argued that the most significant long-term barrier which keep consumers from using online shopping would be the lack of consumer trust. Although it is more difficult for online vendors than for conventional vendors, online vendors should involve both ability and motivation to deliver products and services along with what consumers expected for trust to exist (Jarvenpaa et al. 2000).

Credibility can determine trust, and it means that trust depends on credibility (Cassell and Bickmore 2000; Corritore et al. 2003; Ganesan 1994; Rieh and Danielson 2007; Yoon 2002). Also, McKnight and Kacmar (2006) suggested that credibility and trust have a meaningful relationship. Therefore, if consumers perceive a review as credible product information, they can trust the review. According to Gefen (2000) and Gefen et al. (2003), the fact that consumers can trust a review means that the review has sufficient information what consumers expect from it. Credible review will be expected to contain enough expertise and knowledge about products that can satisfy consumers’ expectation, and thus, consumers can trust credibility of the review. It means that consumers’ perceived credibility of a review is positively correlated with trust towards the review.

2.6.2 Behavioral intention

According to prior research on the effect of an advertisement, credibility is found to have positive impacts on consumers’ behavioral intention. Laffertya and Goldsmith (1999) noted that consumers’ attitude would be more positive for an advertisement from credible endorser and corporate than for
that from less credible endorser and corporate. Credibility of endorser and corporate can improve only consumers’ perception of an advertisement and encourage their attitude towards the brand in a positive direction, and therefore, it can contribute to an increase of purchase intention (Laffertya and Goldsmith 1999). Also, the effect of credibility on consumer’ behavioral intentions is meaningful on the online environments as well as on the offline environments. Choi and Rifon (2002) found that two kinds of credibility, website and advertiser credibility, can influence consumer behaviors towards a product on the Internet.

Trust can be conceptualized as a general belief that can result in behavioral intentions. If consumers have trusting belief, their behavioral intention is more likely to be stimulated. Interacting with others who are not able to be fully predictable puts increasing pressure on consumers to understand motivation and actions of the others (Gefen 2000). This ambiguous situation actually inhibits consumers to make important decisions, and, in order to reduce this complexity, consumers develop a variety of methods to create trust (Gefen 2000).

Trust has played an important role in formation of long-term transactional relationship (Yoon 2002). Trust can strengthen positive dimensions of buyer-seller relationship on the Internet such as reduction of search cost and efficient transaction, and it also mitigates negative dimensions like concerns for security and privacy disclosure, and therefore, trust is a crucial factor for the success of Internet business (Reichheld and Schefter 2000). Trust can help consumers decrease fear of complexity and uncertainty caused by the Internet (Gefen 2000), and alleviate their perceived risk of negative consequences of online transaction (Mayer et al. 1995).

Yoon (2002) found that trust is positively correlated with purchase decision of consumers, and it
means that high trust in an online retailer can lead to high online purchase intention. This is because consumers who have trust in an online vendor may expect that negative outcomes of transaction such as participation of a vendor in opportunistic behaviors would not happen. In other words, trusting relationship with online sellers can help consumers believe that the sellers will deliver products or services they ordered, and protect their privacy. Therefore, consumers who perceive trust in an online retailer are more likely to shop online than those who do not trust the retailer. Also, trust can contribute to an increase of product sales by helping consumers resolve various transaction-related obstacles (Beatty et al. 1996).

Consumers can use product information from a review in order to make a purchase decision whether to buy a product through the Internet. Consumers who perceive a review is credible tend to have more confidence in adopting the review on their purchase decisions (Cheung et al. 2009). It means that perceived review credibility can enhance consumers’ purchase intention towards a product. Consumers may think that they can obtain useful product information from a credible review. Also, we can expect that if consumers are able to trust a review, they will base their purchase decision on the review (Jarvenpaa et al. 2000; McKnight et al. 2002b; Yoon 2002). Therefore, consumers’ trust towards a review can stimulate their purchase intention on online shopping. As a result, consumers’ purchase intention can be defined as an important consequence of credibility and trust. While consumers’ actual purchasing behavior may not be the direct outcome of purchase intention, we can assume that there is positive relationship among them.

2.7 Research model for review credibility
This study developed a research model that represents variables that can contribute to consumers’ credibility evaluation of an online consumer review. This study tries to apply our research model (Figure 2.4) to develop a research model for review credibility. Figure 2.6 shows interrelationships among antecedents of review credibility, and consequences of review credibility, trust and purchase intention.

![Figure 2.6 Research model for review credibility](image)

Figure 2.6 explains how factors are associated with consumers’ perceived credibility of an online consumer review. First, Figure 2.6 describes the role of antecedents of review credibility. Website characteristics and reviewer characteristics contribute to their credibility evaluation before influencing review credibility. That is, each of website credibility and reviewer credibility can function as an intermediary for interrelationships among website characteristics and reviewer characteristics.
and review credibility. This is because we can assume that website credibility and reviewer credibility have significant effect on consumers’ credibility evaluation of a review. Unlike website characteristics and reviewer characteristics, review characteristics and consumer characteristics are directly connected with perceived review credibility.

Second, Figure 2.6 shows how consumers’ perceived credibility of a review influences its consequences, trust and purchase intention. Prior research found that both of credibility and trust can stimulate consumers to purchase online by alleviating their perceived risk of negative consequence of online transaction. Considering that credibility is a determinant of trust, trust can be an intermediary to mediate the interaction between review credibility and their behavioral intention. As a result, it means that credibility evaluation of a review contributes to trust towards the review, and that trust may have positive impacts on consumers’ purchase intention.
Chapter 3. Online consumer reviews

3.1 Drivers of online shopping

3.1.1 The Internet and online shopping

Today consumers consider the Internet as one of useful information sources. Several unique features of the Internet make itself being distinguishing from traditional media, and those are the limitless capacity, the interactivity and the ubiquity (Perterson and Merino 2003). The Internet offers almost limitless repository for information and helps consumers search, organize, share and diffuse information (Perterson and Merino 2003). Also, the interactivity of the Internet can support various kinds of communications among diverse players those who interact each other through the online environments, and the ubiquity of the Internet helps consumers overcome physical constraints to access information (Perterson and Merino 2003).

Lots of firms are using the Internet for strategic purposes to promote their products, and as a result, the product sales of online shopping grows up every year. It is found that several product categories are more favored on online shopping than traditional offline shopping (Levin et al. 2003). Considering that numerous consumers rely on the Internet to seek product information, the role of the Internet as an information source should get to be more important (Nie and Erbring 2000). Consumers can obtain a plenty of information about product quality thorough the Internet, and try to improve consequences of shopping behaviors by efficiently comparing several online retailers. Consumers use the Internet as a useful communication tool to acquire and deliver product information, and thus, the Internet introduces a new concept of buyer-seller relationship (Kwak et al. 2002).
3.1.2 Reduction of search cost for product information

Consumers generate and exchange information about attributes of product through the Internet, and the interactivity of the Internet helps consumers reduce time, cost and efforts for searching product information (Ratchford et al. 2003). Ratchford et al. (2003) noted that expected payoff and time are important determinants for consumers to select information sources, and that is why consumers perceive the Internet as a valuable information source. The Internet facilitates interconnections among consumers through various new communication channels such as email, online forums, and newsgroups to share information far more easily than ever before (De Bruyn and Lilien 2008). As a result, on the Internet, consumers can access a large amount of product information before purchasing and make more efficient purchase decisions at less cost.

A reduction of search cost for product information on the Internet is one of the most important factors that can stimulate consumers to buy online. Consumers invest less time and efforts to get product information on online shopping than offline shopping, and a reduction of search cost offers an enjoyment for consumers to increase quality of decision making (Lynch, Jr. and Ariely 2000). Also, the Internet can provide various alternatives for consumers (Limayem et al. 2000; Olshavsky and Granbois 1979).

In particular, a reduction of search cost caused competitions among online retailers, and online shopping makes consumers take information about not only products but also vendors. It means that consumers’ switching cost over various vendors decreased on the Internet (Bakos 1997; Reibstein 2002). Therefore, online sellers face with fierce price competitions, and as a result, prices of prod-
ucts which are sold on online shopping become lower than offline shopping (Bakos 1997; Bakos 1998; Lynch, Jr. and Ariely 2000; Reibstein 2002). That is, drivers such as cheaper price, convenience, and saving time that stimulate consumers to buy online are consequences of competitions among online sellers caused by a reduction of information search cost on the Internet (Alba et al. 1997; Ahuja et al. 2003; Bakos 1998; Horrigan 2008; Khalifa and Limayem 2003; Limayem et al. 2000)

3.2 Online consumer reviews

3.2.1 Online shopping and decision aids

While online shopping facilitates consumers’ information search behaviors, an increase in number of alternatives might cause an information overload, and may end up in having a negative effect on quality of decision making (Jacoby et al. 1974; Jacoby 1977; Keller and Staelin 1987; Lurie 2004). The most immediate cause of information overload is a dual role of the Internet as both private information and public communication medium (Berghel 1997). Consumers may fail to deal with a huge amount of information, which might lead to the possibility of decreasing quality in choice (Lee and Lee 2004). This is because information-intensive environments of online shopping can contribute to an increment of consumers’ perceived uncertainty (Häubl & Trifts 2000).

The potential consequence of the excess of information is consumers’ making suboptimal decision and/or developing decision heuristics to simplify the decision task (Reibstein 2002). That is, information overload may cause the rise of search cost, and it can lead to an increased reliance on satisfying instead of optimization, and make consumers delay purchase (West et al. 1999).
The first attempt to overcome the information overload on the Internet is the use of a search engine (Berghel 1997), and it is difficult for consumers to find useful information from an amount of outcomes of search engines. While search engines show its best performance when information is well indexed, graded and categorized, it is not enough for consumers to rely on the search engines to deal with the extreme variegation and lack of quality control on the Internet (Berghel 1997). That is, a search engine cannot be the most suitable tool to satisfy consumers’ long-term need for information search on the Internet.

Berghel (1997) and Maes (1994) argued that the use of information agents can help consumers overcome the information overload and contribute to the reduction of search cost for online information. Information agents can be used as filters through which consumers can scrutinize information that is consistent with their individual tastes and need. Consumers can acquire customized information from information agents, and thus, they can decrease unnecessary search cost.

In particular, information agents can play an important role as decision aids for product information. Purchase decisions are directly associated with consumers’ financial benefits and risks, and consumers tend to invest a lot more time and efforts to get useful product information. Consumers can take advantage of consideration sets from information agents. Consequently, online consumers actively search for decision aids that can help them obtain useful product recommendations (Todd and Benbasat 1992; Todd and Benbasat 1999), and these recommendations can influence consumers’ building trust in products (Gershoff et al. 2003; Häubl and Murray 2003).

Therefore, developing useful decision aids like information agents can help consumers alleviate the side effect of the Internet, the information overload, and lots of online vendors try to offer sever-
al decision aids to help consumers (Swaminathan 2003). For example, feedback mechanism and recommendation system used on websites such as eBay (www.ebay.com) and Amazon (www.amazon.com) can be representatives of decision aids (Chen et al. 2001; Dellarocas 2003). These tools can improve product sales by improving quality and efficiency of consumers’ decision making (Chen et al. 2001; Häubl and Trifts 2001; West et al. 1999).

3.2.2 Online consumer reviews and online shopping

Product related WOM conversations have migrated to online markets with the rapid growth of the Internet, and lots of reviewers contribute to creating electronic communities through which a wealth of product information including online consumer reviews are generated (Ghose and Ipeirotis 2010). Marketers have considered WOM communication as a valuable marketing resource (Hu et al. 2008). It is the fast spread of WOM communication through the Internet that makes online consumer reviews become a useful information source. Both of consumers and online retailers can take advantage of online consumer reviews. Consumers can get helpful product information from reviews, and marketers can use reviews for management activities such as reputation building and customer acquisition (Hu et al. 2008).

Online consumer reviews are one of important product-related recommendations written by previous consumers. This is due to the fact that reviews can provide consumers with indirect experiences from the perspective of consumers to reduce the uncertainties of inferring product quality (Hu et al. 2008). Consumers may seek others’ opinions to manage perceived risk of transacting with online vendors (Dowling and Staelin 1994). This is because consumers think recommendations
from others as the only of predominant information for purchase decisions (Beatty and Smith 1987; Olshavsky and Granbois 1979).

Above all, it is important that consumers perceive online consumer reviews as the most credible online information (Bickart 2002; Bickart and Schindler 2001; Chen and Xie 2004; Chen and Xie 2008; Smith et al. 2005). Consumers evaluate reviews more informative and useful than other online information in terms of credibility and relevance (Bickart and Schindler 2001; Chen and Xie 2004; Chen and Xie 2008; Huang and Chen 2006; Smith et al. 2005), and this is because reviews are user-oriented information (Park and Stice 2000). For example, Bickart and Schindler (2001) found that consumers tend to recognize information from Internet forums to be more persuasive than seller-created product information. Also, Smith et al. (2005) pointed out that consumers are more likely to rely on peer recommendations than editorial ones. In particular, online consumer reviews are perceived as proper product information to satisfy consumers’ idiosyncratic tastes (Chen and Xie 2004; Chen and Xie 2008).

As a result, online consumer reviews can support consumers’ information search behaviors as one of useful decision aids. Smith et al. (2005) found that product recommendation obtained from other online peer consumers are one of popular decision aids. Despite popular wisdom that all content on the Internet is accessible, the immense volume and variety of information available on the Internet and consumers’ time constraints provide opportunities for online retailers to make reviews more easily accessible by placing them in appropriate areas (Chatterjee 2001). Also, reviews can help consumers overcome the uncertainty and decrease the amount of information process for products (Hu et al. 2008; Mayzlin 2006).
Park et al. (2007) defined online consumer reviews as product information written by fellow consumers who purchased and used products, and it is why consumers regard online consumer reviews as credible product information. Park et al. (2007) argued that reviews have played two kinds of important roles for consumers, as an informant and a recommender. That is, consumers can get not only objective product information but also subjective recommendations of previous consumers from reviews.

Online consumer reviews are one kind of UGC because consumers voluntarily participate in generating reviews (Cheong and Morrison 2008). UGC can be generated into various forms such as texts, sound, and videos depending on consumers’ purposes and need. According to those definitions of UGC, online consumer reviews can be defined as product-related UGC generated in textual forms. Cheong and Morrison (2008) found that consumers have far more positive attitudes towards UGC than PGC (Producer Generated Content).

According to Bonabeau (2004), consumers tend to think that other consumers have more useful information about products than themselves, and therefore, they attempt to refer to opinions and recommendation of other consumers on their decision makings. That is why online consumer reviews can significantly influence consumers’ buying behaviors (Chatterjee 2001; Huang and Chen 2006; Lee et al. 2008; Park and Kim 2008; Park and Lee 2008; Park et al. 2007). Also, marketers can benefit from using reviews because they are one of the most important determinants of product sales on online shopping (Chevalier and Mayzlin 2006; Dellarocas et al. 2007; Duan et al. 2008; Mayzlin 2006; Hu et al. 2008; Liu 2006).
3.2.3 Online consumer reviews and traditional word-of-mouth

Online consumer reviews are being provided by fellow consumers who voluntarily exchange product information through the Internet. Therefore, it can be defined as a form of eWOM, which is composed of extreme weak ties based upon the anonymity of the Internet (Brown and Reingen 1987). Online consumer reviews can be differentiated from traditional WOM on levels of scalability, speed of diffusion, persistence, and measurability (Dellarocas et al. 2007). Electronic, peer-to-peer communications via the Internet can contribute to transforming the small size of offline community into the large scale of online community with a huge number of consumers.

The similarity between online consumer reviews and traditional WOM is that both of them can directly affect the consumers’ purchasing behavior. Prior research investigated how traditional WOM influences the consumers’ purchase decision (Arndt 1967; Reingen and Kernan 1986; Richins 1983). According to Olshavsky and Granbois (1979), consumers use WOM to overcome the uncertainty of purchasing situation and to decrease the amount of information processing for products. In the same manner, online consumer reviews have significant effects on online buying behavior of consumers (Chatterjee 2001; Mayzlin 2006; Sen and Lerman 2007; Smith et al. 2005; Thomson 2003).

Also, online consumer reviews differ from traditional WOM on five points of views. First, online consumer reviews are usually unsolicited, that is, they can be sent to consumers who are not looking for them on purpose (De Bruyn and Lilien 2008). This is caused by the nature of online consumer reviews, being electronic, and there is no face-to-face communication (De Bruyn and Lilien 2008). According to Dellarocas et al. (2004), the unprecedented scalability and speed of diffusion on the
Internet drive this particular type of mutation.

Second, the Internet can help consumers produce, deliver, and share their opinions about various topics with whom they have little prior relationship (Schindler and Bickart 2005). That is, the magnitude of the network and tie strength among consumers of exchanging information is a major difference between eWOM and traditional WOM (Schindler and Bickart 2005). While traditional WOM is limited to organized local social network such as family and friends (Brown and Reingen 1987), online consumer reviews, as eWOM, are conveyed to the anonymous public through the massive Internet pool (Chen and Xie, 2004). The communication network is much larger for reviews than for traditional WOM because it is a lot easier for consumers to take part in the former rather the latter by developing small personal connections (Cheung et al. 2009).

Third, online sellers can control whether to offer reviews and the extent of reviews whenever it is necessary for their purposes (Chen and Xie 2004; Chen and Xie 2008). Such features of online consumer reviews can offer potential profits to online sellers. In particular, considering that negative reviews have more influences on consumers (Ahluwalia 2002; Chatterjee 2001; Herr et al. 1991; Lee et al. 2008; Sen and Lerman 2007), it will be helpful for online vendors to properly manage negative reviews.

Fourth, measuring effectiveness of online consumer reviews can be relatively efficient compared to traditional WOM. Once a review has been established, it does not disappear into thin air and can be stored permanently for future references (Dellarocas et al. 2004). Godes and Mayzlin (2004) examined how we can evaluate the effects of reviews from measuring volume and dispersion of them. Therefore, the importance of reviews, especially on product sales and revenue, can be analyzed...
quantitatively, and online retailers can benefit from those properties of reviews (Chevalier and Mayzlin 2006; Dellarocas et al. 2007; Duan et al. 2008; Godes and Mayzlin 2004; Mayzlin 2006; Hu et al. 2008).

Fifth, it is possible for consumers to use online consumer reviews whenever and wherever they want as long as they have a connection to the Internet. This is because the Internet can help remove the restrictions on time and location of exchanging eWOM among consumers (Cheung et al. 2009). In addition, Hoffman and Novak (1997) suggested that this kind of asynchronous discussions is able to support consumers to utilize information at their own pace, and thus, consumers can take advantage of reviews based on the interactivity of the Internet.
Chapter 4. Research tool

4.1 Research tool

4.1.1 Research characteristics

This study attempts to investigate relations among multiple variables around consumers’ perception of review credibility. These variables have strong theoretical supports because they were selected from findings of prior research from various research areas. This study developed a research model based on a synthesis of hypotheses from prior research in order to test whether extant theories can be applied into our research model to describe antecedents and consequences of consumers’ perceived credibility of reviews. It means that the goal of this study is not a theory development but a theory testing in the new context called online consumer reviews, and this is why our research model involves variables which have enough theoretical validity.

Therefore, this study is a confirmatory research to find a meaningful relation among already examined variables rather than an exploratory research to investigate a connection among unknown variables. In addition, our research model includes many variables, and the relationship among those intrinsic and extrinsic variables is complex. That is why this study needs to adopt a data analysis technique that can satisfy following two requirements. First, a research tool should be suitable to a theory testing rather than a theory development, and second, it needs to simultaneously investigate complicated interrelations among a large number of independent and dependent variables. For this purpose, this study employed SEM techniques to test our research model.
4.1.2 Structural equation modeling

A main objective of the first generation statistical tools such as regression is to reject a null hypothesis by increasing the prediction of variance explanation based on high r-square and significant t-value (Anderson and Gerbing 1988; Shah and Goldstein 2006; Thompson et al. 1995). On the other hand, the purpose of SEM is to show that there is non-significant difference among a covariance matrix derived from a research model and that from sample data (Gefen et al. 2000; Shook et al. 2004). That is, SEM presents whether hypotheses being tested is corroborated and not disconfirmed by sample data (Bollen 1989; Hair et al. 1998).

Our research model is established from strong theoretical base and suggests several hypotheses developed from prior studies, and it means that this study is a confirmatory research. Thus, it needs to examine whether sample data is statistically in accordance with our research model so that we can conduct a theory testing (Bollen 1989; Hair et al. 1998). It was found that SEM is best suited for a confirmatory research because the overall fit between a hypothesized model and sample data is investigated by using various indices and residuals provided from SEM (Baumgartner and Homburg 1996; Gefen et al. 2000; Shah and Goldstein 2006). Also, SEM is more preferred to determine a research model is valid rather than to find a suitable model (Gefen et al. 2000), and therefore, the goal of SEM is to test well-developed theories (Barclay et al. 1995). Considering that hypotheses from our research model have solid supports from prior research, we can find an answer to the first requirement for our research model.

SEM is useful to test a complex research model with many variables by modeling relationships among multiple independent and dependent constructs (Gerbing and Anderson 1988). SEM is ade-
quate for sophisticated research models because it can partial out variance for an entire model (Gefen et al. 2000). In contrast to regression that minimizes variance, SEM attempts to maximize likelihood (Gefen et al. 2000). Also, SEM is more suitable to figure out whether data support a research model than regression (Gefen et al. 2000), and thus, it can meet the second requirement for our research model.

4.1.3 Validity of research model

SEM cannot be used without substantive theoretical supports (MacCallum 1986; MacCallum et al. 1992) because 1) the overall fit and explanation of a research model can be decreased, and 2) it is difficult to account for relations among variables from a proposed model if there is not enough knowledge. Consequently, SEM cannot be used for an exploratory research but for a confirmatory research because of concerns for equivalence and over-fitting of a research model with sample data (Bollen 1989; Hair et al. 1998). It should be considered that sound theoretical base is necessary to generalize findings of hypothesized models.

In this study, relations among various antecedents and consequences of perception of online information are investigated in the context of online consumer reviews. We developed a research model from findings of prior research that is regarding consumers’ perceived credibility of reviews. Accordingly, this study is a confirmatory research and, for the abovementioned reasons, we adopted SEM to test whether our model fits sample data well.

Variables and measurement were selected from diverse research fields such as information system (e.g. MIS), marketing, advertising, computer science, and psychology, and also, their connections
were established from findings of those studies. Therefore, our research model has concrete theoretical base that is an important requirement of SEM, and it means that there are sufficient evidences for the validity of our research model in order to use SEM for hypotheses testing.

4.2 Instrument development

4.2.1 Measurement variables

Our research model is made up of latent variables, and these variables are not easily gauged because they are only theoretically established. Therefore, SEM needs to employ a specific approach that can measure latent variables to examine our research model through real data. For this purpose, this study chooses measurement variables from prior research to facilitate the quantification of latent variables. Prior research suggested that SEM should adopt several measurement variables to estimate a latent variable (Baumgartner and Homburg 1996; Shah and Goldstein 2006), and our research model follows recommendations of prior research.

Thus, in our research model, not only relations among latent variables but also relations among latent variables and measurement variables are supported by strong theoretical evidences. This procedure is necessary for this study to fulfill requirements of a confirmatory research, and thus, it contributes to the validity of our research model. Table 4.1 shows measurement variables used to estimate latent variables, and all the measurement variables were gauged by the seven-point scale.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Measures</th>
<th>Evidences</th>
</tr>
</thead>
</table>

Table 4.1 Measurement variables
<table>
<thead>
<tr>
<th>Website features</th>
<th>Perceived</th>
<th>A11. Do you think that the website is well known to the public?</th>
<th>Corritore et al. (2005), Jarvenpaa et al. (2000), McKnight et al. (2002b), and Yoon (2002)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived reputation of website (PRW)</td>
<td>A12. Do you think that the website has a good reputation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A13. Do you think that the website is highly regarded?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A14. Do you think that the website is well respected?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived quality of website (PQW)</td>
<td>A21. Do you think that the website works very well?</td>
<td>McKnight et al. (2002b), Poddar et al. (2009), and Yoon (2002).</td>
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<td>A22. Do you think that you can easily find the information you wanted on the website?</td>
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<td>A23. Do you think that the website resembles other sites you think highly of?</td>
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<td>A24. Do you think that the website has good interface and design?</td>
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<td>Perceived familiarity of website</td>
<td>A31. Do you think that you are familiar with the website?</td>
<td>Gefen (2000), and Gefen et al. (2003)</td>
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<tr>
<td>Site (PFW)</td>
<td>A33. Do you think that you are familiar with searching for the target product on the website? A34. Do you think that you are familiar with buying the target product on the website?</td>
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<tr>
<td>Perceived credibility of the website (PCW)</td>
<td>A41. Do you think that the website is believable? A42. Do you think that the website is convincing? A43. Do you think that the website is credible? A44. Do you think that the website has expertise?</td>
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<tr>
<td>Consumer shopping experience (OSE)</td>
<td>B11. How often do you rate your level of experience in terms of going on-line? B12. How would you rate your level of experience in terms of online shopping? B13. Do you think that you are skilled at routines of the Internet?</td>
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<td>Prior knowledge of product</td>
<td>B21. Have you heard about the target product? B22. Do you know the target product well? B23. Do you think that you have enough knowledge about the target product?</td>
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Choi and Rifon (2002)

Goel and Prokopiec (2009), Shim et al. (2001), and Smith et al. (2005)

Park et al. (2007)
<table>
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<tr>
<th>Perceived features</th>
<th>C11. Do you think that the reviewer is reputable?</th>
<th>Corritore et al. (2005), Jarvenpaa et al. (2000), and McKnight et al. (2002b)</th>
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<td></td>
<td>C12. Do you think that the reviewer is highly regarded?</td>
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<td>C13. Do you think that the reviewer is well respected?</td>
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<td>C21. Do you think that the reviewer is knowledgeable about the target product?</td>
<td>De Bruyn and Lilien (2008), and Smith et al. (2005)</td>
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<td>C22. Do you think that the reviewer is a good source of information about the target product?</td>
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<td>C23. Do you think that the reviewer has expertise about the target product?</td>
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<td>C24. Do you think that the reviewer has reviewed a large number of products?</td>
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<td>C31. Do you think that the motive behind the reviewer posting the review was to accurately inform other buyers about the quality of the target product?</td>
<td>Sen and Lerman (2007)</td>
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<tr>
<td>C32. Do you think that the review can well reflect how good the target product is?</td>
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</table>
| **Perceived of report reviewer (PRAR)** | C33. Do you think that the goal of the review is to describe the target product?  
C34. Do you think that the review is based on true experience and feelings of the reviewer? | De Bruyn and Lilien (2008), and Smith et al. (2005) |
|----------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------|
| **Perceived credibility of reviewer (PCR)** | C41. Do you think that the reviewer is similar to you?  
C42. How close would you feel to the reviewer?  
C43. If you can interact with the reviewer, how likely would you be to spend time socializing with him? | Choi and Rifon (2002), Greer (2003), Johnson and Kaye (2004), Johnson and Kaye (2009), Johnson et al. (2008), and Lafertya and |
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<tr>
<td>Perceived quality of review (PQ RV)</td>
<td>D11. Do you think that the review is clear?</td>
<td>D12. Do you think that the review is comprehensive?</td>
<td>D13. Do you think that the review is well written?</td>
<td>D14. Do you think that the review is concise?</td>
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<tr>
<td>Perceived usefulness of review (PU RV)</td>
<td>D21. Do you think that the review provide useful information about the target product?</td>
<td>D22. Do you think that the review is helpful for you to understand the target product?</td>
<td>D23. Do you think that you can use the review in your purchase decision?</td>
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<tr>
<td>Perceived relevance of review (PR RV)</td>
<td>D31. Do you think that the review is congruent to the target product?</td>
<td>D32. Do you think that the review has a good fit for the target product?</td>
<td>D33. Do you think that the review is relevant to the target product?</td>
<td>D34. Do you think that the review is compatible</td>
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<td>with the target product?</td>
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<tr>
<td>Perceived credibility of review (PC RV)</td>
<td>D41. Do you think that the review is believable?</td>
<td>(Greer 2003; Johnson and Kaye 2004; Johnson and Kaye 2009; Johnson et al. 2008; Sundar and Nass 2001)</td>
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<td>D42. Do you think that the review is fair?</td>
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<td>D43. Do you think that the review is accurate?</td>
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<td>D44. Do you think that the review is in-depth?</td>
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<td>Trust towards review (TRRV)</td>
<td>D51. Do you think that the review is trustworthy?</td>
<td>Corritore et al. 2005; Gefen 2000; Gefen et al. 2003; Smith et al. 2005</td>
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<td>D52. Do you think that the review is honest?</td>
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<td>D53. Do you think that the review is believable?</td>
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<td>D54. Do you have confidence in the review?</td>
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<td>Purchase intention (PI)</td>
<td>E11. How likely is it that you will buy the target product from the website?</td>
<td>McKnight et al. 2002b; Jarvenpaa et al. 2000; Park et al. 2007</td>
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<td>E12. Compared to when you did not read the review, how likely is that you consider purchasing from the website?</td>
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<td></td>
<td>E13. How likely is it that you will recommend the target product to your friends?</td>
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4.2.2 Structure of research model

Figure 4.1 shows a structure of our research model that is consisted of seventeen latent variables and sixty two measurement variables. We can find following three implications from Figure 4.1. First, our research model has a complicated structure with multiple independent variables and dependent variables, and SEM is an appropriate to analyze this kind of complex relations. Second, the use of SEM makes it possible to efficiently describe sophisticated relations among measurement variables at the abstract level of latent variables. Third, adequate relations among latent variables and measurement variables based on theoretical evidences can help our research model possess enough validity.

Figure 4.1 Structure of research model for review credibility
Chapter 5. Online experiment

5.1 Experiment design

5.1.1 Experimental products

Lots of products are sold on the Internet, and these products possess different attributes or different levels of the same attributes (Figueiredo 2000). While online shopping helps consumers evaluate quality of product attributes, the access to product information may be limited across product type. Products are often classified into several categories depending on the extent of how much useful information consumers can get from product attributes on the Internet.

On the end of the spectrum are commodity products, where product quality can be clearly and concisely evaluated, and on the other end of the continuum are look and feel products, whose quality is difficult to assess online (Figueiredo 2000). From the similar point of view, products can be grouped into high-touch products and low-touch products, where the former are products that consumers feel they need to inspect physically before buying (Chiang and Ruby 2003; Lynch et al. 2001), and the latter are products that generally favor online services because of special importance placed on shopping quickly (Levin et al. 2005).

A book is a quasi-commodity like a CD, DVD and PC (Figueiredo 2000) and has characteristics of low-touch and low price (Chen and Barnes 2007). Particularly, attributes related to search process, such as shop quickly, large selection, and best price, are considered more important for consumers who want to buy a book on the Internet (Levin et al. 2005). Consumers prefer to use online shopping to buy books because most of product attributes can be assessed easily via the Internet (Girard
et al. 2002), and thus, a book forms a comparatively mature online market (Walter et al. 2006).

5.1.2 Experimental websites

This study selected retailer websites as subject websites among various kinds of websites to investigate consumers’ perception of online consumer reviews. Although other websites also utilize reviews, an important reason why this study used retailer sites is that owners and marketer of retailer sites are more likely to control reviews than other websites (Yun et al. 2008). This is because reviews are closely related to the product sales of retailers (Yun et al. 2008), and they tend to rely on reviews to stimulate consumers’ purchasing behavior. Therefore, this study chose two well-known retailer websites of South Korea as the experimental websites.

This study selected Yes24 (www.yes24.com) and Aladin (www.aladin.co.kr) that are online bookstores of South Korea as target websites. Reasons why this study chose them are as followings. First, Yes24 and Aladin are pure online retailers which have no offline presence. Consumers can purchase books only through the website of those vendors. Although they do not have offline stores, consumers can get all kinds of services on their websites.

Second, Yes24 and Aladin are one of the most famous online bookstores. Yes24 is the first retailer that began to sell books on the Internet in South Korea, and nowadays it is the biggest online bookstore in South Korea. Aladin also is well-known for consumers, and has a significant amount of a market share.

Third, Yes24 and Aladin help their members to actively generate online consumer reviews by providing them with blogs to publish their opinions about purchased books. Reviews published in those
blogs are automatically linked with Yes24 and Aladin, and thus, written reviews are presented to other consumers to help their purchase decision.

5.1.3 Subjects

Four hundred undergraduate and graduate students joined in an online experiment, and this is due to the fact that those who frequently use the Internet and have enough online shopping experiences are young adults (Cheong and Morrison 2008; Gallagher et al. 2001; Horrigan 2008). Young adults are good samples for marketers who try to analyze consumers’ online behaviors (Cheong and Morrison 2008; Gallagher et al. 2001). In particular, considering that online consumers are generally younger and more highly educated than conventional consumers, student samples are closer to the online consumer population (Gallagher et al. 2001; McKnight et al. 2002b).

The participants were asked to choose their favorite website in order to minimize potential memory bias (Liao et al. 2010). They selected a website that they prefer the most among various online bookstores, and then this study provides them with questions in the context of the selected website. Selecting a favorite website can help participants reduce memory bias since it provides a contextual and natural scenario (e.g., Pavlou 2003). In other words, this study allowed only those consumers who prefer Yes24 and Aladin to join in our online experiment. In particular, in order to remove subjects who are not skilled at using Yes24 and Aladin, the participants were required to answer whether they have ever purchased books from those stores. This study tries to increase the validity of the online experiment through this process.
5.1.4 Experimental procedure

This study carried out an online experiment to test hypotheses established from our research model. An online survey was used to conduct the experiment, and according to prior research, it has following merits. First, participants cost of respondents can be reduced through an online survey (Sproull and Kiesler 1986). Second, it is possible to gather data at a fast rate because an online survey does not take too much time for respondents (Couper et al. 2001). Finally, it was found that the use of online surveys can lessen response bias (Boyer et al. 2002; de Leeuw and Nicholls 1996).

The participants took part in our online experiment through e-mail, and they were asked to complete the experiment individually by joining a URL attached in an e-mail. They began the first stage of the online experiment after reading an introduction including several cautions.

In the first stage, participants were asked to select their favorite website among several online bookstores, and then, they were required to answer whether they have purchased books on a target website. Participants were given different contextual situations depending on the selected website. In other words, participants who prefer Yes24 were given questionnaires related with Yes24. In the second stage, participants were asked to evaluate their perception of a target website in terms of perceived reputation, perceived quality, familiarity, and perceived credibility. In the third stage, the participants were provided with information about a target product, a book, that they can access on the target website. After reading seller information about a book, participants were required to assess themselves by answering questions related with prior knowledge about the book, and online shopping experiences.

Before moving to the next step, the experiment noticed participants that they will read an online
consumer review about the target book that is available on the target website. In the fourth stage, the experiment showed participants the profile of a reviewer who wrote the review. Participants’ perception of the reviewer were measured by several factors such as perceived reputation, perceived expertise, perceived rapport, perceived motivation and perceived credibility. In the fifth stage, the participants read the review, and evaluated it based on perceived quality, perceived usefulness, perceived relevancy, perceived credibility, and their trust towards the review. In the sixth stage, they assessed their purchase intention of the book, and lastly, they were asked to fill in their demographic information such as age, gender, and occupation.

This study used two kinds of books, and thus, conducted 2 (the target websites) x 2 (the target books) factorial design in order to increase the validity of an online experiment. Four hundred subjects joined in the experiments respectively, and as a result, one hundred participants were assigned to one of the four experimental sessions. For each group, the number of males was equal to that of females, and it means that two hundred males and the same number of females joined the experiment.

5.2 Follow-up test

5.2.1 Need for cross validation

This study conducted a follow-up test to increase the validity of our research model. Cross validation can contribute to the generalization of findings of this study by examining an extant research model based on the new, independent sample. That is, cross validation investigates whether our research model can be supported from sample data by identifying how well the research model fits an
independent sample from the same population (Chin and Todd 1995).

The fact that results of the second data set is identical to that of the first data set means that our research model possesses sufficient validity to explain relationships among variables suggested from the sample data (Chin and Todd 1995). Lots of studies related SEM has recommended the use of cross validation to make the best use of SEM and to increase the explanatory power of a research model. This study adopted the proposition of prior research and conducted a follow-up test to enhance the validity of our research model.

5.2.2 Experimental products

The first online experiment used a book as subject products. This study attempted to use products that have different product attributes from books for a follow-up test, and a digital camera was selected as an additional target product. An important reason why this study used a digital camera as a subject product is that a digital camera is more sophisticated and expensive than a book. Many consumers refer to online consumer reviews on their purchase decision of a digital camera because of its complex product features.

While a digital camera emphasizes different product attributes than a book, these two kinds of products have something in common. First, a digital camera and a book is popular product categories on the online shopping environment, and second, many consumers are posting reviews on the Internet to exchange information about them. Not only books but also electronics such as a digital camera are preferred by consumers on the online shopping because consumers can easily access their important product attributes via the Internet.
Therefore, the second online experiment of this study, that is, a follow-up test, used a book and a digital camera as the target products. This study attempted to increase the validity of our research model by using two products of having different product properties.

5.2.3 Experimental websites

This study used Interpark (www.interpark.com) and 11st (www.11st.co.kr) as target websites. In the same manner as the first online experiment in which Yes24 and Aladin were employed, the second experiment was also executed for retailer websites such as Interpark and 11st. It means that this study tries to focus on consumers’ perception of reviews from retailer websites.

The reason why Interpark and 11st were used as target websites for our follow-up test is identical to that of the first experiment of using Yes24 and Aladin. First, Interpark and 11st have no offline presence and sell goods only through the Internet. While these websites cannot offer physical contacts to consumers, they are trying to satisfy consumers’ requirements with helpful product information and service. Therefore, consumers can feel convenience during their online shopping behaviors on these websites.

Second, Interpark and 11st are one of the most famous retailer websites in South Korea, and lots of consumers are now visiting these websites not only to buy products but also to obtain product-related information. Consumers perceive that Interpark and 11st have good reputation, and thus, these websites possess a huge amount of online market share in South Korea.

Third, Interpark and 11st stimulate consumers to post online consumer reviews on their websites and attempt to develop various strategies to efficiently generate reviews and deliver them to con-
consumers. Interpark and 11st take into account how to manage reviews in terms of both of themselves and consumers. It means that consumers of using these two websites for online shopping are familiar with utilizing reviews to their purchase decision and also have enough experiences about how to benefit from reviews.

In addition, it should be considered that there is a little difference among the first experiment and a follow-up test. Yes24 and Aladin are online booksellers and thus, a few kinds of product categories such as a book, CD, and DVD are sold on their websites. On the other hand, in Interpark and 11st, consumers can purchase not only abovementioned products but also other kinds of products including electronics, clothing, and food. That is, Interpark and 11st can serve consumers with more diverse product categories than Yes24 and Aladin. As a result, the second experiment of this study can contribute to the validity of our research model by using different type of retailer websites for the online experiment.

5.2.4 Subjects and experimental procedure

Our follow-up test was carried out through the identical procedure with the first experiment based on an independent sample from the same population. First, four hundred participants for the second experiment were made up of graduates and undergraduates. This study used two kinds of books and also two kinds of digital cameras for the experiment, and thus, 2 (the target websites) x 2 (the target books) x 2 (the target cameras) factorial design was implemented for the second experiment. Fifty subjects were allocated in one of eight experimental conditions, and the number of males was equal to that of females for each of groups. In the same manner as the first experiment, the new sample is
consisted of two hundred males and the same number of females.

Second, the subjects individually took part in the experiment for the follow-up test through a URL attached in an e-mail and are assigned to one of eight cells. The most preferred website for online shopping among several retailer websites was selected by the subjects, and also they were asked whether they have experience of purchasing products from a chosen website. Those treatments for the follow-up test were performed to reduce potential memory bias of the subjects with offering them contextual and natural scenario. This study includes only those who are familiar with using the target websites in the experiment to get rid of negative bias related with the use of retailer websites.

The subjects completed the experiment through the seven procedures that is the same with the first experiment. They were required to evaluate their perception of antecedents and consequences of perceived review credibility based on the identical constructs used for the first experiment. The possibility that the subjects misunderstand the procedure or feel inconvenience during the experiment was minimized because their assessment of all the measures was accomplished on the context of their chosen retailer website, that is, Interpark or 11st.
Chapter 6. Results

6.1 Analysis procedure

This study used SEM to validate our research model, and AMOS 7.0 was employed. An analysis procedure through SEM is made up of two steps in line with the suggestion of Anderson and Gerbing (1988). In the first stage, confirmatory factor analysis (CFA) is performed to evaluate measurement model to exclude measures that cannot satisfy recommended criteria. CFA examines convergent validity, construct reliability, and discriminant validity to assess conformity of constructs used in the research model. Particularly, in order to confirm internal consistency before hypotheses test, and Cronbach’s $\alpha$ was gauged to analyze reliability of questionnaires. In the second stage, the causal structure of the research model was tested using structural equation analysis, and path analysis was used to confirm hypotheses in the structural model.

6.2 Measurement model

6.2.1 Convergent validity and construct reliability

Table 6.1 exhibits results of convergent validity and construct reliability for the first experiment. Results of CFA proposed that several measures such as A24 which is related with website quality, and C31 which is related with reviewer motivation were excluded from our measurement model.

Table 6.1 Convergent validity and construct reliability for the first experiment

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<tr>
<th>Construct</th>
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<td>Perceived reputation</td>
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<td>Perceived credibility</td>
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All of item loadings for convergent validity were significant (p<0.05), and they were above 0.7 that is recommended by prior research (Bogozzi 1981; Bagozzi and Yi 1988; de Reuver et al. 2009; Taylor et al. 2009). Construct reliability was investigated by analyzing composite reliability (CR) and average variance extracted (AVE), and Table 6.1 represents that all the values meet recommended criteria (CR>0.7; AVE>0.5) (Bogozzi 1981; Bagozzi and Yi 1988; Cretu and Brodi 2007; Liao et al. 2010; de Reuver et al. 2009; Taylor et al. 2009). We can find from Table 6.1 that Cronbach’s α of measures is sufficiently high, and it means the measures can be used for hypotheses test.

Also, this study conducted CFA in order to analyze whether sample data of the follow-up test is appropriate to delineate our research model (Table 6.2). Similar with the first experiment, convergent validity and construct reliability were identified for CFA. Criteria for the measurement model were those from prior research used for the first experiment.

**Table 6.2 Convergent validity and construct reliability for the follow-up test**

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Four measures including A11, A44, C34 and D14 were removed from the measurement model after implementing CFA. A11 was adopted to measure participants’ perception of reputation of a target website, and A44 was connected with perceived credibility of the website. C34 was one of constructs for perception of motivation of a reviewer, and D14 was related with perceived quality of a review.

Factor loading of all the constructs used for the follow-up test, except for abovementioned four constructs, were found to satisfy recommended value of prior research, and it means that sample data has convergent validity (Bogozzi 1981; Bagozzi and Yi 1988; de Reuver et al. 2009; Taylor et al. 2009). Table 6.2 reveals that CR and AVE are above the threshold of previous studies, and, thus,
CFA of the second experiment indicates adequate construct reliability (Bogożzi 1981; Bogożzi and Yi 1988; Cretu and Brodi 2007; Liao et al. 2010; de Reuver et al. 2009; Taylor et al. 2009). In addition, Cronbach’s α of every measure is higher than 0.9, and it shows sufficient reliability. As a result, sample data used for the follow-up test shows enough validity to test our research model.

### 6.2.2 Discriminant validity

Prior research suggested that discriminant validity of CFA can be examined via two procedures. First, Anderson and Gerbing (1988) suggested that correlation coefficient among variables should not include 1.0 to have discriminant validity, and results of the first experiment meet those criteria (Table 6.3). Second, the correlations among constructs should be lower than the square root of AVE (Cretu and Brodi 2007; Fornell and Larcker 1981a; Fornell and Larcker 1981b; Liao et al. 2010; de Reuver et al. 2009; Taylor et al. 2009), and Table 6.3 indicates that square root of AVE for each variable is larger than its correlation with other constructs. Therefore, the first experiment satisfies requirements for discriminant validity.

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Also, results of the second experiment followed the criteria of prior research to confirm discriminant validity of our research model, and Table 6.4 shows the correlation and the root square of AVE of sample data for the second experiment. First, the follow-up test meets the requirement of Anderson and Gerbing (1988) that correlation coefficient among variables of the research model should not be 1. Second, it is found that correlation coefficients with other constructs are smaller than the square root of AVE for each variables (Cretu and Brodi 2007; Fornell and Larcker 1981a; Fornell and Larcker 1981b; Liao et al. 2010; de Reuver et al. 2009; Taylor et al. 2009). Thus, our follow-up test satisfies those two requirements of discriminant validity.

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6.2.3 Measurement model fit

Our research model has appropriate convergent validity, construct reliability and discriminant validity, and it means that the research model is suitable for criteria of CFA recommended by prior research.

In order to examine model fit of the first experiment, sample size dependent rather than sample
size independent measures of goodness-of-fit were used (Cretu and Brodi 2007). While Chi-square (2864.522, df=1574, p=0.00) did not meet recommended value, other measures indicated a good-model fit in line with requirements of prior research with CFI=0.934 and IFI=0.935, being above 0.9 threshold, and with RMSEA=0.045 and RMR=0.044, being below 0.05 threshold (Cretu and Brodi 2007; de Reuver et al. 2009; Gefen 2000; Gefen et al. 2003; Hair et al. 1998; Liao et al. 2010; Taylor et al. 2009). That is, this study complemented Chi-square with other goodness-of-fit measures to make sure that results of the first experiment have enough validity.

Although Chi-square of the first experiment is not appropriate, Hair et al. (1998) proposed that Chi-square is quite sensitive to large sample sizes, especially for cases in which the sample size exceeds two hundred respondents. This study conducted the first experiment with a large sample of four hundred participants, and it may be a reason why Chi-square cannot meet recommended value. While Chi-square is improper, chi-square/degrees freedom is 1.820 being below 5.00 threshold of recommendation from prior research (Hair et al. 1998; Liao et al. 2010).

Also, our follow-up test adopted sample size independent measures of goodness-of-fit used for the first experiment to investigate the measurement model fit (Cretu and Brodi 2007). The reason why the follow-up test employed criteria which are independent of sample size is identical to the first experiment. Our second experiment used sufficiently huge size of sample which is consisted of four hundred subjects to test the research model.

Except for Chi-square (2846.469, df=1460, p=0.000), other indicators shows appropriate model fit to complement Chi-square (CFI=0.934, IFI=0.934, RMSEA=0.049, RMR=0.048, and Chi-square/df=1.950). It means that sample data for the second experiment is well-suited for the re-
search model and, therefore, relationships among constructs can be used to test hypotheses (Cretu and Brodi 2007; de Reuver et al. 2009; Gefen 2000; Gefen et al. 2003; Hair et al. 1998; Liao et al. 2010; Taylor et al. 2009).

6.3 Structural model

Having satisfied measurement requirements, this study carried out the path analysis to assess a structural relationship. Results of the first experiment indicated a good fit with CFI=0.939 and IFI=0.939. Also, other goodness-of-fit statistics satisfied recommended value with RMSEA=0.044 and RMR=0.044. Also, a structural model fit for the follow-up test shows that relationships among constructs can properly describe the research model with enough validity (CFI=0.935, IFI=0.935, RMSEA=0.049, and RMR=0.048).

This study conducted the follow-up test to examine our research model from the independent sample, and it was found that results of the second experiment are similar to that of the first experiment. Considering that cross validation is one of useful ways to identify whether how well research model is suitable to sample data (Chin and Todd 1995), results of two experiments represent that our research model possesses sufficient validity for the hypotheses testing.

Accordingly, we can generalize the findings of our research model based on cross validation, and it also means that propositions of prior research about consumers’ evaluation of information can be used as useful theoretical foundations to figure out consumers’ perception of online consumer reviews. Figure 6.1 presents results of testing individual paths for the research model, and both of experiments have similar outcomes.
Above all, we identify the effect of antecedents of review credibility on consumers’ perception: website, reviewer, receiver, and review features. First, in the case of website features, although consumers’ perception of reputation, quality, and familiarity of a target website has a significant effect on their evaluation of credibility of the website, it was found that perceived credibility of a website has nothing to do with perceived credibility of a review. While the finding that such website characteristics can be important determinants of consumers’ positive perception of a website is consistent with prior research, this study suggested that consumers evaluate credibility of a review regardless of the website from which the review is offered.

Second, except for perceived rapport, reviewer features such as reputation, expertise, and motiva-
tion of reviewer can play an important role on consumers’ perception of review credibility. Also, perception of a reviewer is closely related with perception of a review, and findings mean that the concept of source credibility from prior research is still meaningful in the context of online consumer reviews.

Consumers do not consider perceived rapport of reviewer to evaluate review credibility, and it is different from expectations of prior research related with tie strength and perceived similarity. This result might be due to the fact that cues of online consumer reviews that can indicate perceived rapport were not used in appropriate ways in the target websites, and we can discuss it more in the following section.

In addition, while reviewer evaluation has a strong role in review evaluation, there is no significant link among website evaluation and review evaluation. That is, consumers do not base their assessment of a review on how well a website is established, and they only concern who generated the review but where it came from.

Third, individual characteristics of subjects such as online shopping experiences and prior knowledge of a target product cannot influence their perceived review credibility. That is, how long consumers have used the Internet and online shopping, and how much knowledge they have about target products cannot determine their review evaluation.

It may be caused by the fact that our sample used is consisted of young adults such as undergraduates and graduates. We should take into account that they are familiar with the Internet and also are active online shoppers. Our subjects prefer the target websites and are used to purchasing products from those websites, and thus, they can feel convenience to refer to a review. It may affect the
result of the online experiment.

Fourth, review features like quality, usefulness, and relevance of review are significantly con-
nected with consumers’ evaluation of review credibility. The more consumers feel that a review is of
high quality, useful, and relevant to a product, the higher their perceived credibility of the review
would be. Results correspond with findings of prior research that message attributes influence re-
ceivers’ adoption of information, and thus, how to deal with message content is important to in-
crease credibility of reviews.

In addition, as the same manner with antecedents of review credibility, this study examines rela-
tionships among consequences of review credibility and consumers’ behavioral intention. First, per-
ceived credibility of a review can help consumers form trust towards the review. It means that if
consumers perceive a review is credible, they also trust it. Considering that trust is an important de-
terminant for the success of online shopping, online vendors need to develop the ways to enhance
perceived credibility of reviews posted on their websites.

Second, if consumers trust a review, their purchase intention of a product can be stimulated. This is
because consumers with trusting belief towards product information are more likely to purchase a
target product. Perceived credibility of a review can help consumers to form trust towards the re-
view, and their purchase intention would be encouraged through this procedure. Therefore, review
credibility can positively affect consumers’ purchase intention, and it also is significantly connected
with the product sales of online retailers. This is how online retailers can take advantage of reviews,
and review credibility is crucial for them.
Chapter 7. Findings

7.1 Discussion

7.1.1 Importance of research model

This study tries to analyze factors that can influence consumers’ perception of information credibility on the Internet and how these factors are related with consumers’ behavioral intentions. This study suggests a research model through which variables associated with credibility evaluation of online information can be divided into four classes such as message, source, medium, message, and receiver characteristics.

While our research model is established from propositions of prior research, it improves a previous model to delineate consumers’ perceptual process of online information in a more elaborate way. This study confirmed detailed variables that belong to four antecedents of information credibility suggested by prior research, and our research model is developed based on relations among those variables, especially, in terms of information credibility. Important variables that have been used to explain consumer behavior on various areas were selected for our research model and thus, our research model is supported by strong theoretical evidences.

Also, in contrast to prior research that only concerns antecedents of information credibility, this study considers consequences of information credibility for a research model. The use of consequences helps distinguish our research model from finding of prior research, and this study can suggest a blueprint to understand how online information exert a meaningful impact on consumers’ behavioral intention. Thus, this study proposes a general perceptual model that is well-suited to ex-
plain information processing procedures of consumers on the Internet.

7.1.2 Importance of review credibility

This study examines how our research model works on consumers’ perception of online consumer reviews. We selected reviews as the target context because of following reasons. First, reviews deliver product information. Consumers’ perceived risk of negative consequences of online transactions is higher for the online shopping than for the traditional shopping. Consumers use the Internet to search product information in order to reduce perceived risk because there is no physical contact between consumers and products on the online shopping in contrast to the traditional shopping. It is important that product information is significantly related with consumers’ benefit, and thus, reviews can play a strong role on online shopping behaviors of consumers.

Second, we should consider that reviews are UGC produced by fellow consumers. This is why many consumers think that reviews are the most useful and credible product information, and as a result, reviews become one of the most widely used online information. Lots of studies are being implemented to investigate how to take advantages of UGC because consumers are more likely to rely on UGC than other online information. Both of consumers and firms are interested in the use of UGC, and many Internet services to benefit from UGC are being developed. Therefore, reviews are appropriate research target for our research model to identify consumers’ perceptual process of online information.

Results of applying our research model into consumers’ perception of online consumer reviews are as followings. First, this study pointed out that consumers’ reviewer evaluation significantly influ-
ence their review evaluation. It means that the more consumers perceive that a reviewer is credible, the more they perceive that a review is credible. While reputation, expertise, and motivation of reviewer have a strong role in consumers’ perceived credibility of review, their perceived rapport of reviewer cannot determine credibility evaluation of review.

In contrast to findings of prior research related with tie strength and perceived similarity, our research model suggested that perceived rapport of reviewer cannot have an important effect on perception of reviewer credibility. This result was not expected from this study because it was found from prior research that information receiver’s perceived rapport towards an information sender can be used as a basis for information evaluation and that it also determines whether a receiver adopts information.

The fact that our target websites do not utilize sufficient information about a reviewer to increase consumers’ perceived rapport of the reviewer might lead to this result. Indeed, it is difficult for consumers to obtain information related with similarity of reviewers on their profile which can be found on the target websites. Considering that perceived rapport can play an important role on consumers’ information processing, online retailers need to develop various cues to help consumers feel perceived rapport with reviewers through reviewer profile information in order to increase consumers’ perception of review credibility.

Second, all of review features can play important roles to increase consumers’ perceived credibility of review. This study proposes that quality, usefulness, and relevance of a review can have strong effects on credibility evaluation of the review. In particular, not only how much information of product details a review can offer consumers but also how well the review is written without errors...
is crucial for review evaluation. It means that message content involved in a review and how it is presented to consumers should be considered at the same time to enhance perceived review credibility.

Those results, connected with reviewer and review features, are in accordance with findings from prior research of identifying that source and message characteristics are the most important determinants of receivers’ evaluation of online information (Dutta-Bergman 2003; Eysenbach et al. 2002; O’Keefe 2002). According to these studies, source credibility is an important feature of source, and information completeness is crucial for message content. Particularly, it should be considered that consumers’ perception of source is not independent from their perception of message content. There is a meaningful relationship between source and message characteristics, and also, information receivers use nature of message content as useful cues to imply source characteristics (Dutta-Bergman 2004).

That is, whether consumers perceive source of online information as credible can influence their perception of information credibility, and thus, the evaluation of source credibility is used as an important procedure of consumers’ judgment of online information (Eysenbach et al. 2002). Also, if consumers perceive that message delivered through online information is complete, they are more likely to refer to received information on their decision making (Dutta-Bergman 2003; Eysenbach et al. 2002). Thus, consumers’ judgment of credibility of online information is based on not only their perception of source but also of message content. Findings of this study suggest that online retailer can benefit from developing review strategies that can help consumers easily evaluate source and message content of online consumer reviews.
Third, there is no meaningful connection between perception of website and perception of review. While prior research found that consumers’ perception of online information may differ depending on information media, this finding cannot be applied to the context of online consumer reviews. Although website features like reputation, quality, and familiarity of website can contribute to credibility evaluation of website as we assumed from prior research, this study suggests that these factors may not influence consumers’ credibility evaluation of a review.

We should take into account that reviews are generated by consumers as one type of UGC to understand why website features do not have significant effects on perceived review credibility. Considering that target websites of the online experiment are online retailers that generally produce PGC, we can assume that consumers evaluate reviews regardless of the websites because reviews are engendered by consumers who are independent of retailers. Consumers can feel that reviews belong not to websites but to fellow consumers, and this may be why website features have no relation with review evaluation.

Also, our findings suggest that information source, a reviewer, should be clearly discriminated from information medium, a website. While source and medium are similar concepts, they have different roles on information flow on the Internet. Thus, it is important not to confuse source with medium and to use those concepts correctly (Walthen and Burkell 2002), and particularly, this study confirms that we need to be more careful to use them in areas of UGC. Our research model found that consumers’ perception of reviewer features is different from website features when they evaluate review credibility, and therefore, we can assume that perceived differences between source and medium is stronger for consumers using UGC.
Fourth, individual features including online shopping experiences, and prior knowledge of target products do not have significant connections with perceived credibility of review. It is consistent with prior research arguing that consumers are more likely to depend on recommendations of other consumers rather than their own knowledge and experiences in situations related with purchasing decisions (Beatty and Smith 1987; Olshavsky and Granbois 1979). Also, consumers think that fellow consumers have more helpful opinions about product quality than themselves (Bonabeau 2004). This study identified that this tendency appears clearly in the review context, and, we can assume that, this is because reviews include product information and, at the same time, they are engendered by fellow consumers as UGC. It means that consumers are more influenced by the excellence of a reviewer than by their own ability when they refer to reviews on purchase decisions, and as a result, consumers do not base evaluation of review credibility on their knowledge and experiences.

We already know that lots of active online shoppers are young adults who are familiar with the use of the Internet, and it would be better for this study to employ such subjects to understand consumers’ online behavior. Therefore, subjects who have sufficient transaction experiences with target websites joined online experiments, and our choice of the subjects was in line with the purpose of this study to investigate how consumers perceive online information.

In addition, we performed a sort of treatment to help the participants carry out the experiments. Our online experiments conducted a screening procedure that is constituted of two stages, and as a result, this study used only participants those who prefer the subject websites among various online retailers and have ever bought products from those websites. Through this procedure, this study tried to increase the validity of the experiments by providing our participants with natural experi-
mental contexts.

Despite of our endeavors to reduce memory bias of the subjects, individual characteristics do not have significant influences on how they perceive review credibility. Considering that there are several contrary opinions about the impact of individual features on consumers online behavior, findings of this study can help resolve confounding results of prior research.

Lastly, this study suggests that positive perception of review credibility can encourage consumers to form trust towards a review and to make purchase decisions on the Internet. That is, review credibility can play an important role in terms of positively affecting trust and purchase intention on the online shopping environment. It means that trust and purchase intention are consequences of review credibility. Building trust among consumers and online vendors is the most important driver of online transactions because it can help consumers overcome the uncertainty of online shopping. Also, it is important for online retailers to make endeavors to increase consumers’ perceived credibility of review to increase purchase intention of consumers.

7.2 Conclusion

Findings of this study can make several propositions about how to help consumers evaluate online information, especially for online consumer reviews. Schindler and Bickart (2005) found that consumers tend to rely on source and message characteristics to determine their adoption of eWOM, and our findings correspond with Schindler and Bickart (2005). Thus, it would be helpful to provide consumers with reviews having credible message content and information about source credibility in order to enhance their adoption and evaluation of reviews.
First, consumers need a review that has a relation with products through which they can get helpful information about product attributes. It is crucial to make consumers understand products rather than just recommending products to them with positive messages including subject feelings of a reviewer. While offering consumers a well-written review is crucial, it may be more effective to make consumers perceive that they can find information of product details they are searching for from the review. Particularly, if consumers perceive that a review involves first-person experience about products, they are more likely to use it as credible information for purchase decisions.

Second, it should be considered that consumers usually base their credibility evaluation of a review on the excellence of a reviewer rather than other reviewer features. In particular, consumers rely on reputation and expertise of reviewer to assess credibility of review. It means that how to make consumers feel that a reviewer has enough knowledge and experiences about reviewed products is important to increase perceived credibility of a review.

7.3 Contribution

7.3.1 Theoretical implications

This study has following theoretical implications. First, this study suggests a perceptual process of how online information affects consumers’ behavioral intention with respect to information credibility. While many studies have been interested in information search behavior of consumers on the Internet, to our knowledge, still there are not enough studies on how consumers perceive online information. Findings of this study can help enhance consumers’ perception of online information because our research model identified important variables that can influence perceived information
credibility. Thus, we can expect that our research model contributes to the reduction of consumers’ negative bias towards online information. In addition, Internet stakeholders can utilize our research model in terms of how to benefit from online information. For example, they can adopt our research model to develop several implications to manage online information in order to stimulate and predict consumers’ online behavior.

Second, our research model investigated antecedents and consequences of information credibility, especially for review credibility, and it can help answer several questions about hidden relations between perception of information and behavioral intention. Reviews can play an important role on firms’ management activities because consumers perceive reviews as useful and credible product information. Despite of previous research about the effect of reviews, relations between consumers’ perception of reviews and contribution of reviews to firms’ management activities were not identified. This study proposes that trust and purchase intention are consequences of review credibility. According to our research model, review credibility can stimulate consumers’ purchase intention towards products, and thus, that is why reviews can contribute to the product sales of firms. The importance of reviews on the online shopping is emphasized in this study, and review credibility can play a crucial role on both of consumers and online vendors. We can found useful implications from our research model in terms of how to generate and deliver credible reviews to consumers.

Third, this study emphasizes the role of information credibility on UGC area by identifying variables that can affect credibility evaluation of online consumer reviews. This study contributes to the enlargement of boundaries of research area about information credibility on the Internet by highlighting how credibility interacts with UGC, that is, online consumer reviews. Our findings would
be helpful to overcome the absence of authority caused by the fact that reviews are UGC not generated by professionals but by fellow consumers.

UGC is one of the most frequently used online information, and consumers who do not satisfy with PGC are more likely to depend on UGC. Also, it is important that consumers are more influenced by UGC rather than PGC. In particular, UGC tends to be exchanged among consumers through social network service (SNS). Nowadays, a plenty of online services are being developed based on SNS, and we can expect that this Internet trend will intensify consumers’ reliance on UGC. Considering that there are not enough studies considering the role of UGC on the online shopping, our research model can contribute to following research by investigating how consumers perceive UGC and refer to it on their behavioral intention.

Fourth, our research model can be used as a theoretical basis to develop an improved model that can delineate consumers’ perception of online information. We can apply our research model into different information type and compare results so that it will be possible to establish a more powerful theory in order to examine how consumers adopt online information. There are various kinds of information on the Internet, and how consumers recognize online information may be different across the information type. For instance, online information can be grouped into two classes, UGC and PGC, depending on who produce the information. Thus, future research can confirm our research model in contexts of different online information, and it would be insightful to investigate whether our findings are limited to the review context, product information and UGC. As a result, our research model can help understand consumers’ online behavior for online information.
7.3.2 Managerial implications

This study suggests several managerial implications for marketers in terms of how to utilize online consumer reviews. Online sellers who have interests in developing review strategies can obtain helpful advices from our findings.

First, an offer of profile information of a reviewer that emphasizes reviewer credibility can contribute to the effect of a review on consumers. Marketers can facilitate various cues through profile information of a reviewer to help consumers notice that a reviewer has written reviews of high quality and satisfied other consumers. The use of additional cues to distinguish credible reviewers from other reviewers, for example, displaying pictures or symbols near the name of reviewers, can be one of useful strategies.

Also, marketers can access consumers through well-known opinion leaders who can diffuse positive message about products. Today, lots of consumers are related with others via several SNS, and some consumers have a large number of online friends. We can expect that communications with opinion leaders who have good reputation can exert great persuasive influences on consumers. Therefore, marketers can utilize profile information of SNS to support consumers to develop their social network with other consumers including such opinion leaders so that online consumer reviews can be disseminated thorough the online social network.

Second, marketers should make not only reviewer credibility but also review credibility appeal to consumers. It is necessary for marketers to use additional cues that can help consumers easily recognize the excellence of a review. For example, information about how many consumers recommended a review can be offered to consumers because consumers would be affected by the review
with many recommendations from fellow consumers more than that with few recommendations. Also, granting sort of titles to a review like ‘the best review’ or ‘review of a week’ to guarantee credibility of the review can make consumers perceive that the review has notable performance. This study proposes that it is necessary for online vendors to develop and utilize several cues which can reveal outstanding features of a review to increase consumers’ credibility evaluation of the review.

In addition, more detailed review strategies will be discussed in Chapter 8.

7.4 Limitations and future research

Despite of several theoretical and managerial implications, this study has limitations as followings. First, this study selected renowned online vendors as target websites for online experiments. They sell products and services to consumers through online transactions. While consumers can access online consumer reviews from the target websites, it should be considered that there exist other kinds of websites where consumers can obtain reviews. Consumers are able to read reviews and deliver them to other consumers through websites such as personal blogs and online communities. It may be an intriguing issue for future research to investigate whether consumers’ perception of a review can be different across different types of websites.

Second, a book and a digital camera was chosen as experimental products for the online experiments because they are one of the most frequently purchased products, and lots of reviews about them are being posted on the Internet. A book and a digital camera are appropriate for objectives of this study, and also, Bloch and Richins (1983) pointed out that developing models for all kinds of products can cause reduced degree of explanation. Nevertheless, it needs to regard that various
kinds of products are purchased by consumers on the Internet because the product type can mediate consumers’ perception of reviews. Prior research has used several criteria to divide products into various classes, and this classification would be helpful to investigate interrelations among product features and the effect of reviews.

Third, this study used the sample that is made up of only young adults including undergraduates and graduates for the online experiments. Young adults are heavier Internet users than other populations, and they also are familiar with purchasing products from the online shopping. While prior research suggested that young adults are the best population to analyze consumers’ online shopping behavior (Cheong and Morrison 2008; Gallagher et al. 2001; Horrigan 2008 McKnight et al. 2002b), the use of sample from various age groups for an experiment can contribute to the generalization of our findings. Therefore, future work can obtain intriguing insights from examining our research model through sample data from other populations.
Chapter 8. Review strategies

8.1 Introduction

8.1.1 Need for review strategies

There is a clear distinction between traditional ad and WOM with respect to how they are delivered to consumers. In contrast to traditional ad message that is delivered to individuals regardless of neighborhoods, WOM message is disseminated from one neighborhood to other neighborhood (Mayzlin 2002). As a result, consumers’ perceived usefulness of traditional ad message has diminished, and they are more likely to refer to WOM than ad message on purchase decision (Godes et al. 2005).

In particular, the emergence of new medium called the Internet changed consumers’ information search behavior drastically by allowing them to access a huge amount of available information. The interactivity of the Internet helps consumers perceive that the Internet is more reliable information source than traditional media (Godes et al. 2005). Thus, firms began to focus on the role of eWOM on the Internet, and various strategies to take advantages of eWOM have been developed. Also, Godes et al. (2005) suggested several propositions to examine how firms can utilize eWOM as a marketing tool for delivering product information (see Table 8.1 and Figure 8.1).

<table>
<thead>
<tr>
<th>Firm’s role</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observer</td>
<td>Firms simply collect information of consumers’ eWOM activity.</td>
</tr>
<tr>
<td>Moderator</td>
<td>Firms attempt to foster eWOM among consumers</td>
</tr>
<tr>
<td>Mediator</td>
<td>Firms actually take control of managing and disseminating eWOM.</td>
</tr>
</tbody>
</table>
Participant | Firms participate directly in generating eWOM to reach consumers.

**Figure 8.1** Firm’s strategies of adopting eWOM (Godes et al. 2005)

The goal of marketers of using eWOM is to increase their product sales by providing consumers with positive messages about their products. Thus, the most effective eWOM strategy may be to generate eWOM that contains opinions of marketers. According to Table 8.1, it is the fourth proposition of Godes et al. (2005), and for this purpose, lots of marketers pose themselves as consumers to exchange product information with other consumers in such Internet places like online communities and chat rooms (Godes and Mayzlin 2004; Godes and Mayzlin 2009; Mayzlin 2006).

While an intentional use of eWOM can contribute to the profit of firms, it can cause consumers to be dubious of credibility of eWOM. If consumers perceive that received information is not credible, they reject to adopt the information. Considering that credibility is being used as one of the most important criteria to assess quality of online information, it is crucial for firms to deliberate how to increase consumers’ perceived credibility of eWOM.

In this section, this study attempts to suggest a theoretical framework from which marketers of
adopting the fourth strategy of Godes et al. (2005), being participants of eWOM activities, can obtain useful insights to produce credible online consumer reviews. This study establishes our framework on findings of our research model about review credibility and prior research about consumers’ information processing. Several managerial implications in terms of how to effectively utilize reviews are proposed from our framework, and it can help marketers develop available review strategies to make the best of reviews to reach consumers.

8.1.2 Message and source

This study clarified that consumers’ perceived credibility of an online consumer review can contribute their trusting belief towards product information delivered by the review. Trust can encourage consumers’ online shopping by improving relationships between consumers and sellers. In this study, the importance of trust that can play a strong role on consumers’ purchase intention was identified. Consumers are more likely to buy a target product recommended by a review with high credibility. It means that perceived review credibility is closely related to consumers’ purchase intention towards a target product, and it is possible for marketers to increase their product sales by making consumers perceive reviews posted on their website as credible product information.

Our research model examined that consumers’ adoption of a review as credible product information is determined by influences of message and source characteristics. This study tries to establish a theoretical framework to help marketers who take the participants strategy benefit from developing credible reviews. Our framework will suggest how to utilize various variables related to message and source characteristics identified by our research model. While firms adopting the moderator or
the mediator strategy can base their review strategies on our framework, those who can make the best use of the framework would be firms of the participant strategy.

Prior research found that message and source characteristics have significant effects on receivers’ information adoption, and this study suggests the framework for developing credible reviews from dual-process approaches proposed by prior research. According to dual-process theories, two factors such as information content of received message and information context can influence consumers’ evaluation of message validity (Chaiken and Trope 1999).

Elaboration likelihood model (ELM) proposed by Petty et al. (1983) and heuristic-systematic model (HSM) by Chaiken (1980) may be the most frequently used dual-process theories. Although there is a slight difference among ELM and HSM to deal with receivers’ information processing and knowledge adoption, those two theories bear the same implications to examine how persuasive effects on information receivers can be determined by different levels and depths of processing, specifically between comprehensive and heuristic processing (Cheung et al. 2009; Zhang and Watts 2003).

Dual-process theories such as ELM and HSM suggested two types of information processing across the extent to which consumers deliberate message content of received information. First, information processing to base judgment of information on its message content is called central processing route, and those who adopt this way tend to exert a lot more cognitive efforts for persuasive communication (Petty and Cacioppo 1986). Argument quality can be used as an important determinant of the degree of persuasive influence for information receivers of central route (Cheung et al. 2009; Petty and Cacioppo 1986; Sussman and Siegal 2003; Zhang and Watts 2003).
Second, information processing that tends to rely on typical cues around information rather than message content itself is termed peripheral route (Cheung et al. 2009; Petty and Cacioppo 1986; Sussman and Siegal 2003; Zhang and Watts 2003). Various types of typical cues that can influence persuasive influence on consumers of peripheral route were identified by prior research, and it includes diverse factors such as number of arguments, attractiveness of source, source credibility, source reliability, and expertise of source (Petty and Cacioppo, 1981, 1984, 1986; Petty et al. 1981, 1983; Puckett et al. 1983; Sussman and Siegal 2003; Zhang and Watts 2003).

Sussman and Siegal (2003) noted that how consumers process information is affected by trade-offs among central and peripheral routes, and it means that consumers’ persuasive interaction of received information does not depend on only one kind of processing route. For example, consumers regarding central route can also refer to source credibility on their assessment of information, and this is because source credibility is not only a simple heuristic cue but also an additional cue for argument quality to play more complex roles (Chaiken and Maheswaran 1994; Heesacker et al. 1983; Sussman and Siegal 2003).

Likewise, we can assume that cues related to message content can have meaningful persuasive influence on consumers following peripheral route. Dutta-Bergman (2004) pointed out that consumers’ judgment of message characteristics is formed from not only simple heuristic cues but also their perception of source characteristics. Also, it was found that consumers’ tendency of simultaneously using those two kinds of routes for information processing is stronger on the computer-mediated communication context rather than the traditional context (Sussman and Siegal 2003).

Our framework for developing credible reviews is based on dual-process theories including both of
central route and peripheral route, and, thus, we should take a complexity caused by the interaction between those two routes into account for establishing the framework. In particular, it needs to consider that the interactivity of the Internet can help our framework facilitate various kinds of cues related with message and source characteristics. This study attempts to refer to previous studies from various research fields that can influence persuasive communication in order to enhance the validity of our framework.

8.2 Information processing theories

8.2.1 Elaboration likelihood model and Heuristic-systematic model

Prior research suggests that there are two different ways for subjects to process information. According to prior studies (Andrews and Shimp 1990; Celsi and Olson 1988; Petty et al. 1983), the first is called the central route. Those who follow this way rely on their diligent consideration of information. It means that they try to scrutinize as many arguments and alternatives as possible before making decisions. The second is called the peripheral route. Those who use this way base their attitudinal changes and judgments on simple inferences about the pros and cons of an issue such as simple positive or negative cues. The peripheral route can be viewed as relatively more habituated information processing compared to the central route.

Those two ways of information processing can be explained by ELM. According Petty et al. (1983), ELM suggests that the elaboration likelihood of communication situations determines the effect of different methods of inducing persuasion. When the elaboration likelihood is high, subjects prefer to use the central route to deal with information. Conversely, when the elaboration likelihood
is low, subjects tend to use the peripheral route because they do not feel to invest their time and efforts to more sophisticated investigation of information. The ELM contends that as a relevance of an issue to individuals increases, they are more likely to produce a contemplated opinion.

In the case of persuasion process, it is important that attitude change is caused by individuals’ diligent contemplation about the true merits of an issue, and thus, individuals of following the central route exert more cognitive processing efforts and prior knowledge for message-relevant arguments rather than other cues (Petty et al. 1983). On the other hand, in the situation of the peripheral route, attitude change is determined by simple positive or negative cues that do not need to consider message-relevant arguments, and hence, individuals are more likely to rely on non-content elements such as source characteristics rather than message content (Andrews and Shimp 1990; Petty et al. 1983). While there is a clear difference between the central route and the peripheral route, it was found that they coexist in practical situations where consumers evaluate information validity (Zhang and Watts 2003).

HSM figure out consumers’ information processing based on the degree of their cognitive efforts and adopt dual-process approaches that is similar to ELM. HSM suggest systematic process and heuristic process, and these two processes are analogous to the concept of central and peripheral route of ELM. Consumers cannot deliberate every message they receive because of their limited cognitive capacity (Sussman and Siegal 2003). Bowen and Chaffee (1974) pointed out that expected benefit of getting information based on the interaction among information receivers and relevant stimulus can determine how they process information. That is, among systematic and heuristic process, which type of information processing consumers may follow depends on the efficiency and
sufficiency of evaluating the message validity (Cheung et al. 2009).

According to Chaiken (1980), message-related cues can maximize persuasive effects on consumers of the systematic processing, and non-content cues minimize persuasive influences. This is because, in the systematic view, while consumers can utilize non-content cues as helpful aids to help judge information, they generally tend to focus on message content (Chaiken 1980). On the other hand, consumers employ the heuristic strategy when economic concerns for cost of information processing predominate, and thus, in the heuristic view, they are more likely to depend on non-content cues than content-related cues to determine their information adoption (Chaiken 1980). As a result, consumers following the heuristic processing are more interested in source characteristics than message characteristics (Chaiken 1980).

8.2.2 Informational and normative influences

One of the strongest determinants that can affect decision making of an individual is the social influence caused by other individuals around an individual (Burnkrant and Cousineau 1975; Cohen and Golden 1972). The social influence is defined as the degree of influence exerted by members of social network on other participants (Rice et al. 1990). How others think and respond to issues and objects can be useful persuasive cues for consumers, and in particular, consumers observe other consumers’ shopping behavior to refer to it on their purchase decision (Burnkrant and Cousineau 1975). It means that while the same information is provided from the same source, persuasiveness of received information can be different across a receiver’s individual stance. Thus, whether a receiver adopts information depends on the social influence exerted from other people around the receiver.
Individuals tend to base their judgment on others’ judgment (Deutsch and Gerrard 1955), and Deutsch and Gerrard (1955) suggested two types of persuasive social influences that can affect persuasiveness of received message: informational influence and normative influence. While two types of information processing proposed by ELM and HSM rely on the extent of cognitive efforts, the dual-process approach of Deutsch and Gerrard (1955) utilizes an information receiver’s individual attitude towards other people around the receiver to determine the persuasive communication. Thus, in the context of the social influence, it is important to understand relationships in which an information receiver and other people are involved to describe persuasiveness of information processing caused by the social influence.

First, the informational social influence is to consider information obtained from others as evidence about reality, and consumers assess the information validity from relevant arguments and factual information (Burnkrant and Cousineau 1975; Cheung et al. 2009; Cohen and Golden 1972; Deutsch and Gerrard 1955; Kaplan and Miller 1987; Pincus and Waters 1977). According to Cheung et al. (2009), the informational social influence is based on receivers’ individual judgment and attitude towards received information itself, and hence, information-related features are used for an evaluation of information. In particular, the informational social influence is important for consumers of evaluating product quality (Cohen and Golden 1972; Pincus and Waters 1977), and this is because the informational influence works better to deliver product details in more diligent ways to consumers.

Second, the normative social influence means that an information receiver’s desire to follow others’ expectation can influence judgment of the information, and, also, the exposure to others’ choice,
preference and norms can determine the degree of the normative social influence on the persuasive communication (Burnkrant and Cousineau 1975; Cheung et al. 2009; Cohen and Golden 1972; Deutsch and Gerrard 1955; Kaplan and Miller 1987; Pincus and Waters 1977). In the situation of the normative influence, communication evaluation of an individual is more likely to be influenced by opinions of audience around the individual rather than received information itself. Kaplan and Miller (1987) pointed out that the more an information receiver favors a sender during their communication, the more the receiver’s information adoption is affected by the normative social influence. In addition, although informational influence has more frequent and stronger effects on individuals (Kaplan and Miller 1987), those two kinds of social influences tend to appear simultaneously (Deutsch and Gerrard 1955).

We can assume that the social influence is significantly connected with the concept of ELM and HSM because cues about thoughts and behaviors of others around an information receiver also can be used as message and source characteristics. Thus, the social influence cannot be independent of message and source characteristics. This study attempts to combine the concept of social influence with ELM and HSM to establish our framework, and it can help develop strategies to increase consumers’ perception of review credibility.

8.2.3 Culture and subjective norms

Information consensus formed among consumers can determine their perception of information (Bone 1995), and thus, the degree of consensus among reviewers can serve as useful cues for the validity of online consumer reviews (Schindler and Bickart 2005). Particularly, this tendency ap-
pears to be stronger in collectivistic cultures such as China (Cialdini et al. 1999). For example, Cheung et al. (2009) clarified that the normative social influence can enhance Chinese consumers’ adoption of reviews by stimulating their collectivistic characteristics.

Participants of a high-context (HC) culture are more likely to be involved in their intimate relationships (Hall, 1976). In HC cultures, there exists a structure of social hierarchy, and the communication among members is performed via indirect and ambiguous message with deep meaning which includes situation, behavior, body language and the use of silence (Gudykunst et al. 1996; Hall 1976; Taylor et al. 1997; Würtz 2006). On the other hand, participants are more individualized in a low-context (LC) culture (Hall, 1976). In LC cultures, the communication tends to be carried out through an exchange of direct and precise message containing explicit statements in text and speech (Gudykunst et al. 1996; Hall 1976; Taylor et al. 1997; Würtz 2006).

Hofstede (1980) suggested collectivism and individualism dimension as an alternative and similar concept of HC and LC cultures. According to Hofstede (1980), individualism is defined as "a preference for a loosely knit social structure in which individuals take care of themselves and their immediate families only", and collectivism is defined as "a tightly knit social organization in which individuals can expect other in-group persons to look after them".

An important difference between collectivism cultures and individualism cultures is whether goal and achievement of individuals are more emphasized than that of group in which members are involved (Pavlou and Chai 2002; Würtz 2006). According to Würtz (2006), HC/LC dimensions and collectivism/individualism dimensions are significantly interrelated, and that is, HC cultures tend to be collectivistic, and LC cultures have a tendency to be individualistic. As a result, group bonds and
harmony are more emphasized in HC and collectivism cultures, and explicit communication and clear procedures are more important in LC and individualism cultures (Park and Jun 2003).

Also, prior research proposed the concept of the power distance as an important factor to explain differences among various cultures, and it is determined by the extent to which unequal power distribution caused by the discrepancy between less powerful members and more powerful ones is accepted in a group (Hofstede 1980; Marcus & Gould 2000; Pavlou and Chai 2002). The power distance can have a strong impact on the way participants of a group communicate each other (Yun et al. 2008), and hence, it is one of crucial determinants to form a structure and a hierarchy of organizations.

High power distance is closely related to HC cultures, and this kind of society shows characteristics of cultures including many hierarchical levels, autocratic leadership, and the expectation of inequality and power differences (Hofstede 1980; Marcus & Gould 2000; Würtz 2006). On the other hand, low power distance is an important property to describe LC cultures, and this kind of society is represented by cultural characteristics such as flat organization structures, consultative or participative management style, and the expectation of egalitarianism (Hofstede 1980; Marcus & Gould 2000; Würtz 2006).

Prior research adopted abovementioned dimensions to classify countries of various cultures into several groups. Asian cultures including Korea, Japan, and China are HC cultures, and countries such as Germany, Denmark, Sweden, Swiss, Norway, Finland, and U. S. are representatives of LC cultures (Gudykunst and Nishida 1986; Hall, 1976; Kim et al. 1998; Taylor et al. 1997; Würtz 2006). Also, individualism is stronger in western cultures like U. S. and U. K. than eastern cultures
such as Korea, China, and Japan, and thus, it is not easy for individuals in western cultures to accept
the unequal relationship among members represented by the power distance (Cho and Cheon 2005;
Pavlou and Chai 2002).

Koreans are generally collective (Hofstede 1980, 1991; Park and Jun 2003; Taylor et al. 1997; Yun
et al. 2008), and they are more likely to follow opinions of their peers compared to members of in-
dividualism cultures (Park and Jun 2003). As a result, Korea tends to show low individualism score,
high score on the power distance, and high risk and uncertainty avoidance (Clearly Cultural 2011;

The subjective norm is perceived social pressure to perform the behavior (Ajzen 1991; Ajzen and
Madden 1986), and it serves as important social influence. The subjective norm is based on norma-
tive belief accepted, encouraged, and promoted among group members in which an individual in-
volves (Pavlou and Chai 2002), and normative belief means that a possibility of whether referent
individuals or groups approve that the execution of certain behavior has a strong effect on an indi-
vidual (Ajzen 1991; Pavlou and Chai 2002).

Therefore, although individuals do not prefer a certain behavior and its consequences, if important
referents of individuals expect them to do it, and they will try to follow their referents (Venkatesh
and Davis 2000). Lots of studies have been conducted to examine a meaningful relationship be-
tween the subjective norm and individuals’ behavioral intention and perception (Schepers and Wet-
zels 2007; Taylor and Todd 1995; Venkatesh and Davis 2000). According to the theory of planned
behavior, it was found that individuals’ positive attitude towards the subjective norm can enhance
their intention to conduct a certain behavior under consideration (Ajzen 1991).
In particular, the subjective norm influences members of collectivistic societies more than of individualistic societies (Pavlou and Chai 2002), and, thus, individuals of collectivism and HC cultures are more likely to refer to opinions of peers on their behavioral intention. The finding indicates that, among two types of the social influence, the effect of the normative social influence on individuals’ judgment is higher for collectivism and HC cultures such as Korea rather than for individualism and LC cultures. This is because individuals in eastern cultures have a more tendency to follow others’ expectation towards them than those in western cultures.

We can assume that consumers in eastern culture are more affected by opinions of their important referents to make purchase decision, and also, this phenomenon in collectivism and HC cultures may still exist on the online environments. Therefore, it will be useful to employ various cues to facilitate the normative influence to help individuals adopt online information in collectivism and HC cultures. That is, the use of normative cues on the Internet would be more effective for members of collectivism and HC cultures to reduce their perceived risk of online shopping and stimulate purchase intention.

8.3 Propositions from research model

8.3.1 Review content and product attributes

This study suggests that message content related features delivered by a review are closely associated to consumer’s perception of review credibility. In particular, among review features, perceived relevance of review with product was found to be the most important determinant of perceived review credibility. It means that while consumers use various kinds of cues to evaluate per-
ceived credibility of message content delivered through a review, they tend to base their judgment on detailed description of a target product rather than other information cues. If consumers can obtain enough product details from a review, they will perceive the review as credible product information.

Schindler and Bickart (2005) pointed out that the presence of specific details is one of the most frequently used cues for consumers to assess the validity of product information. The proposition of our research model that the relevance among a review and a product can determine consumers’ perception of review credibility is congruent with Schindler and Bickart (2005) arguing that the elaborate depiction of product attributes can play an important role on consumers’ adoption of product information.

Our theoretical framework for developing credible reviews can take important insights from findings of Schindler and Bickart (2005). It needs for our framework to help consumers get sufficient information about details of a target product from online consumer reviews, and thus, this study attempts to develop useful framework to generate a review through which various cues including central/peripheral route and informative/normative influence can be used to offer consumers product details.

Products involved in the same categories can have different attributes, and also, while attributes of the products are identical, their level can be different (De Figueriedo 2000). Choi et al. (2006) suggested that products are different depending on their information contents. That is, product characteristics emphasized by consumers are different across the product type. Therefore, it needs for our framework to adopt various criteria to classify products into several categories, and, by doing so,
our framework can satisfy heterogeneous requirements of consumers for product details. Prior research employed diverse dimensions that can figure out dominant attributes of products in order to suggest several kinds of product types.

Whether consumers can obtain information about dominant attributes of products before purchasing can be used to distinguish search products from experience products (Klein 1998; Nelson 1970; Nelson 1974). Products are defined as experience products when information search to obtain product details is more costly and difficult than direct experience (Chiang and Dholakia 2003; Klein 1998; Lynch et al. 2001). Chiang and Dholakia (2003) and Lynch et al. (2001) proposed the similar concept, and according to them, products can be put on somewhere on the continuum between high-touch and low-touch products. Also, whether products are preferred on the online shopping or the offline shopping is one of useful criteria for product classification (Klein 1998; Levin et al. 2003, 2005), and in this case, the product type relies on frequency of purchase and value proposition on the Internet (Peterson et al. 1997). Jahng et al. (2000) developed four product categories including simple, experiential, social, and complex products based on the combination between product properties and social presence requirements. Similarly, Choi et al. (2006) applied customers’ involvement and information quality fitness to propose four product dimensions such as complex, intelligent, simple, and light products.

The effect of online consumer reviews on consumers’ behavioral intention can be increased with detailed information about product properties. Considering that consumers’ need for product information for purchase decision may be different across the product type, reviews should employ different type of information and cues to help consumers obtain enough knowledge and expertise about
target products. Therefore, our framework should deliberate how to provide consumers with descriptions of product details to engender credible reviews.

8.3.2 Reviewer profile and online social network

This study found that consumers’ perception of a reviewer is significantly related to perceived review credibility. If consumers perceive a reviewer is a credible information source, they are more likely to perceive a review from the reviewer as credible product information. It means that consumers refer to review profile on their evaluation of review credibility and thus, marketers of utilizing reviews as marketing channels need to inform consumers of the excellence of a reviewer through the profile information.

According to Schindler and Bickart (2005), the identity of consumers who post product information on the Internet can be used for the assessment of information validity. The finding of Schindler and Bickart (2005) is in line with our research model that examined how reviewer features can determine consumers’ perception of review credibility. Our framework should consider various cues of reviews to reveal profile information of reviewers, and it can help online retailers utilize the profile information to help consumers’ evaluation of reviews.

Our framework can get useful insights in terms of how to manage reviewer profile information from prior research focusing on the role of the online social network on the online environment. According to boyd and Ellison (2007), SNS can be defined as “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections
and those made by others within the system”.

Consumers use SNS to keep their friendly relationships through self-presentation (boyd and Ellison 2007; Ellison et al. 2007), and thus, SNS is an appropriate technology to enhance social capital to develop and manage weak ties on the Internet (Ellison et al. 2007; Donath and boyd 2004; Utz 2009, 2010). While relationships with members of the online social network cannot be equal to traditional relationships with offline friends, many consumers tend to put more weights on postings and advices from social network friends rather than paid placements and paid reviews (Clemons et al. 2007). This is because participants of the online social network have shared experiences, shared value, and shared need (Clemons et al. 2007).

Profile information of SNS can help observers’ impression formation towards a profile owner (Ellison et al. 2006; Utz 2010), and SNS can provide users with three types of information for self-presentation such as self-generated information, other-generated information, and system-generated information (Tong et al. 2008). Also, it is important to notice that it is much easier for users to present or to fake their profile information in a positive direction on the online environment rather than on the conventional face-to-face communication (Donath 2007; Utz 2010).

The proper use of profile information of reviewers is helpful strategies to increase consumers’ perception of online consumer reviews. Reviews can employ various kinds of cues to allow consumers to access reviewer features such as reputation, expertise, and motivation through the profile information. Consumers are able to base their evaluation of reviewers on profile information, and it can determine consumers’ adoption of reviews. Therefore, it is important for our framework to suggest how to deliver the excellence of reviewers to consumers via the profile information.
In particular, profile information can be used to improve perceived rapport between a reviewer and consumers. Although our research model confirmed that perceived rapport of reviewer is not a significant antecedent of perceived reviewer credibility, this result may be due to the fact that online retailers still do not utilize information about the rapport for their review strategies. We can assume that it will contribute to perceived review credibility to offer consumers cues connected with perceived rapport of reviewer through the profile information.

8.4 Framework for developing credible reviews

8.4.1 Theoretical framework

This study attempts to suggest a theoretical framework to generate credible online consumer reviews based on the findings of our research model. In addition, information processing theories proposed by prior studies were used as evidences to develop our framework, and as a result, our framework stemmed from three kinds of dual-process theories.

ELM and HSM suggested that how consumers deal with received information can be different depending on the amount of exerted cognitive effects. Thus, it was found that the degree of consumers’ involvement in information processing can determine how they deal with received information. Also, theories of the social influence pointed out that receivers’ judgment of information is significantly affected by opinions and behaviors of other people around the receivers. It means that consumers’ individual attitude towards other members of a group can determine whether received information may have informational influence or normative influence.

First, our research model examined that message characteristics and source characteristics can play
an important role on consumers’ evaluation of review credibility. According to ELM and HSM, consumers who base their judgment of a review on message content itself tend to deliberate product information on a review. These consumers employ the central route or the systematic strategy. In contrast, consumers who hesitate to conduct diligent information processing are more likely to be interested in non-content cues such as source characteristics rather than message content. ELM and HSM found that these consumers assess information based on the peripheral route or the heuristic strategy.

While central and peripheral routes separately influence consumers’ adoption of information, in fact, consumers tend to use them at the same time. In particular, this tendency appears more evidently on the online environment where various kinds of cues coexist (Zhang and Watts 2003). It may be somewhat difficult to make a clear distinction between central cues and peripheral cues, and, therefore, our framework should consider that consumers can simultaneously employ those two kinds of routes to assess online consumer reviews.

Second, whether consumers can obtain enough product details form received information and also, whether they can notice the identity of fellow consumers who posted the information were found to influence consumers’ information adoption (Schindler and Bickart 2005). The findings of Schindler and Bickart (2005) corresponds with our research model pointing out that consumers’ perception of message content and source identity is closely related to their perceived review credibility. If message content delivered through a review can provide consumers with details of product properties, consumers are more likely to be influenced by product information from the review. Likewise, it can support consumers’ judgment of a review to allow them to access reviewer identity through the pro-
file information.

Thus, marketers need to offer consumers information about product attributes and reviewer profile to enhance their perception of online consumer reviews. Product attributes and reviewer profile are well-suited to review strategies because various cues which can help consumers access that information can be easily utilized on the Internet. Thus, this study attempts to establish the framework in which review strategies based on product attributes and reviewer profile can be proposed.

Third, our framework incorporates message and source characteristics with two kinds of social influence in order to engender credible online consumer review. Information processing strategies based on each of message and source characteristics can contribute to consumers’ judgment of information through both of social influences, informational and normative influence. Also, informational influence and normative influence tend to coexist when they affect consumers’ persuasive communication (Deutsch and Gerrard 1955).

This study assumes that the effect of subjective norms shared through online consumer reviews is more evident on information adoption of Korean consumers. The subjective norm among consumers is formed by the exchange of WOM on consumer market (Schepers and Wetzels 2007), and this is one of important reasons why positive WOM from friends, family, and significant others can influence judgment and behavior of WOM receivers (Venkatesh and Brown 2001).

According to prior research, Korea is one of countries in HC cultures (Gudykunst and Nishida 1986; Hall, 1976; Kim et al. 1998; Taylor et al. 1997; Würtz 2006), generally present collectivism, and, also Koreans show high power distance and uncertainty avoidance (Cho and Cheon 2005; Clearly Cultural 2011; stede 1980, 1991; Money et al. 1998; Park and Lee 2009a; Pavlou and Chai
Pavlou and Chai (2002) found that the subjective norm has more significant impacts on individuals’ information adoption in collectivism societies such as Korea than individualism societies. This is because people of collectivism are more likely to refer to opinions of other group members in which they are involved. Thus, Korean consumers tend to rely on thoughts of their important referents to make their judgment of information, and they are more influenced by normative social influence than people in LC and individualism cultures. It does not mean that the effect of informational influence is insignificant on Koreans but that our framework should more carefully consider how normative influence affects the way Koreans process received information.

Therefore, online consumer reviews can be a more useful marketing tool in collectivist cultures like Korea where individuals’ susceptibility to opinions from other people is relatively high (Money et al. 1998; Park and Lee 2009a). This is because the normative social influence of reviews can exert greater effects on consumers in Korea rather than in societies of LC and individualism. In addition, websites of eastern cultures including Korea tend to utilize Internet’s capabilities for consumer-consumer interactions more than websites of western cultures (Cho and Cheon 2005). We should regard that eastern websites are more interested in facilitating various mechanisms such as mandatory registration and incentives to take advantage of online consumer reviews (Yun et al. 2008).

As a result, marketers’ strategies to offer consumers various kinds of cues to exhibit the subjective norm can lead them to engage in positive perception of reviews and purchase intention towards products, and also, this tendency shows up more apparently in Korean consumers (Park and Lee 2009a). It means that our framework may work better for Korean consumers because of their cultur-
al characteristics such as HC and collectivism.

According to Table 8.2, our framework is made up of eight cells to consider two kinds of information processing from cognitive efforts such as central and peripheral route, two types of the social influence including informational and normative influence, and two propositions from our research model like product attributes and reviewer profile. Thus, our framework is based on combinations of those findings.

**Table 8.2 Framework for developing credible reviews**

<table>
<thead>
<tr>
<th>Informational influence</th>
<th>Central route</th>
<th>Peripheral route</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Product attribute</td>
<td>Reviewer profile</td>
</tr>
<tr>
<td></td>
<td>①</td>
<td>②</td>
</tr>
<tr>
<td>Normative influence</td>
<td>Product attribute</td>
<td>Reviewer profile</td>
</tr>
<tr>
<td></td>
<td>⑤</td>
<td>⑥</td>
</tr>
</tbody>
</table>

While our framework is simple, marketers can refer to it to elaborate their review strategies because the framework is supported by strong theoretical background. It is expected that meaningful ideas that can improve consumers’ evaluation of online consumer reviews can be derived from each of eight cells. Also, our framework can help marketers make more clear distinction among extant review strategies.

8.4.2 Review strategies
In this section, we suggest several examples corresponding to each of eight combinations from Table 8.2 to represent what kinds of review strategies can be developed from our framework. Our review strategies can offer marketers intriguing insights in terms of how to benefit from online consumer reviews.

For the first cell, it would be better for marketers to classify product categories depending on product properties because consumers’ need for product information rely on the product type (Chiang and Dholakia 2003; Klein 1998; Lynch et al. 2001). For instance, a book has different product attributes from a digital camera, and thus, the review type for those two products should be different to satisfy consumers’ need. Considering that product attributes emphasized by consumers is different depending on the product type, it needs to develop various kinds of the review template to meet requirements of consumers seeking detailed information of products.

The review template can be consisted of several items that describe product attributes. Which type of items the template should contain can be different depending on the product type to help consumers obtain sufficient product information from a review. That is, our framework suggests that marketers can take advantage of reviews that include different content across different product type.

For the second cell, the aggregate information of products wanted or purchased by consumers can tell lots of things about consumers. It is possible for marketers to forecast consumers’ shopping behaviors based on data analysis of their shopping record and service requirements (Clemons et al. 2007). Marketers can obtain useful insights in terms of managing reviewer profile information from the finding of Clemons et al. (2007). That is, retailer websites can use reviewer profile to reveal detailed information about products that are purchased or reviewed by reviewers, and consumers are
able to evaluate reviewers based on those information.

Consumers can see tastes of reviewers via profile information. If a reviewer has posted many reviews about products that consumers are interested in, consumers are more likely to perceive them as credible information source. Also, perceived similarity can be developed between consumers and a reviewer from reviewer profile information, and it leads consumers to increase their adoption of reviews from the reviewer (Gorenflo and Gorenflo 1997; Walczuch et al. 2001).

For the third cell, Third-Party Assurance Seals (TPAS) have been used to reduce consumers’ concerns about online privacy and security of online shopping (Lee et al. 2004). The use of TPAS can contribute to consumers’ perceived trustworthiness of websites (Kovar et al. 2000; Lee et al. 2004), and this is because TPAS offer consumers a clear signal that online transaction with the websites will be guaranteed (Benassi 1999).

Therefore, marketers can use TPAS as review-related cues to present that message content delivered through a review can satisfy consumers’ need for product information. The introduction of visual cues such as TPAS helps consumers have confident in quality of a review, and it leads to an increment of perceived review credibility. For example, marketers select well-written reviews which correspond to their profit as the best reviews and display them on proper places on their websites. Also, marketers can arrange their website design to expose these best reviews to consumers more frequently, and as a result, it is expected that consumers’ perception of reviews can be improved.

For the fourth cell, Utz (2009) and Utz (2010) pointed out that members of the online social network tend to base their judgment of a profile owner on the number of friends and profile pictures of friends, and that these cues also can influence impression formation towards the target. Marketers
can accept reviewer profile information as a communication channel based on the findings that characteristics of social relationship around a profile owner represent social appearances. It is possible for marketers to help reviewers make sort of the online social network with fellow reviewers or consumers, and reviewer profile connected to the strength of relationship can be delivered to consumers via the online social network. For example, the number of friends of a reviewer can be opened to consumers to help them evaluate the reviewer.

In particular, it should be noted that purchase history of reviewers indicates their tastes and interests of products (Clemons et al. 2007). The number of purchased products, posted reviews, and interested products of reviewers may be useful signals for consumers to evaluate reviewers. That kind of information can be useful peripheral cues from which consumers determine whether a review is credible product information. That is, a review from a reviewer with many friends and enough experiences of posting reviews can have more significant effects on consumers’ behavioral intention. Thus, marketers can select the best reviewers and give them a sort of TPAS to help consumers easily assess reviewers.

For the fifth cell, consensus among opinions of reviewers towards products can play an important role on consumers’ adoption of a review (Schindler and Bickart 2005). It is easier for consumers to compare comments involving various arguments on the online environments (Cheung et al. 2009). If consumers repeatedly read reviews with similar opinions, they are more likely to believe the experience, and thus, this recommendation consistency can exert the normative influence to complement other cues of reviews (Cheung et al. 2009).

According to prior research, recommendation consistency is defined as the extent to which current
eWOM communication is in consistent with others’ opinions on discussed products, and it also is an important normative indicator for eWOM credibility (Cheung et al. 2009; Eysenbach 2000; Vandenbosch and Higgins 1996; Zhang and Watts 2003). If consumers think that the content of review is in line with most of other reviews, consumers perceive the review as more credible (Vandenbosch and Higgins 1996; Zhang and Watts 2003).

Therefore, it is possible for marketers to group reviews together by their message content and to reveal similar reviews to consumers, and it may enhance recommendation consistency of reviews. Consumers perceive recommendation consistency from a review based on the presence of other reviews including similar content. For example, how a review evaluates products and whether it recommends products can be criteria for this kind of review strategy. Also, the review valence is one of important dimensions for review classification, and it suggests three review groups such as negative, positive and moderate reviews.

For the sixth cell, according to the warranting principle, other-generated descriptions are recognized as more trustworthy information rather than target-generated claims by observers (Walther and Park 2002). Also, it was found that the warranting effect can have a strong role on relationships among individuals in the online social network (Utz 2009, 2010; Walther et al. 2008). Friends-generated information affect communication and impression formation among members of the online social network more than self-generated information, and particularly, observers tend to base their judgment of a profile owner on statements of online friends (Utz 2009, 2010; Walther et al. 2008).

Therefore, marketers can utilize comments of members of the online social network where a re-
viewer participates in for reviewer profile information. This is because statements of friends who have social relationships with a reviewer exert greater effects on consumers than self-generated profile information of the reviewer or website-generated one. It will be helpful for marketers to introduce review-generating system that can enhance the social relationship among reviewers and consumers. The exchange of evaluation of reviewers with members of the online social network can increase consumers’ perception of reviewers, and as a result, it can lead consumers to adopt reviews as credible product information.

For the seventh cell, prior research has investigated that receivers’ rating of information can influence their perception of information credibility (Eysenbach 2000; Eysenbach et al. 2000; Price and Hersh 1999). According to Cheung et al. (2009), recommendation rating indicates the overall rating given by information receivers, and it also means how receivers response to the information. If information got high rating by receivers, receivers tend to agree with the information, and thus, their evaluation of the information would be high.

It was found that the rating can have an important effect on consumers’ perception of eWOM (Cheung et al. 2009; Ghose and Ipeirotis 2010). Marketers can choose reviews of high ratings as the best reviews and benefit from disclosing them to consumers. Also, how many consumers recommended a review is a useful indicator to show credibility of the review because the number of recommendations means that there exist high consistency between the review and consumers. Similarly, marketers can emphasize review credibility based on the number of consumers who read the review and the number of comments attached to the review.

Marketers employ the number of recommendations, views, and comments as one of criteria to se-
lect the best reviews, and it can be a useful review strategy to satisfy consumers’ idiosyncratic need for reviews. Also, it is in line with the third review strategy proposed by our framework. Those cues can be meaningful normative and peripheral cues to determine consumers’ adoption of online consumer reviews.

For the eighth cell, the warranting effect suggested that evaluations of friends about a profile owner can influence observers’ impression formation towards the profile owner on the online social network (Utz 2009, 2010; Walther et al. 2008). Marketers can develop peripheral cues for reviewer profile to help consumers assess reviews based on the findings that consumers are more influenced by other-generated information. For instance, those cues can include the number of recommendations from friends or consumers who read reviews posted by a reviewer. The overall rating aggregated from all the posted reviews can be used to indicate the excellence of a reviewer.

Also, various cues representing the strength of social relationship formed among a reviewer and consumers can be used to increase consumers’ perception of a review by allowing them to notice social activities performed by the reviewer. Marketers can choose the best reviewers based on abovementioned criteria, along with the best review strategy, to help consumers’ quick evaluation of reviewers.
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요 약 문
온라인 소비자 리뷰의 인식에 관한 연구 모델

정보 흐름의 통제 및 여과 과정의 부재는 온라인 정보에 대한 소비자들의 인식에 부정적인 영향을 미치고 있다. 온라인 정보에 대한 우려는 일부 소비자들이 온라인 정보를 수용하는 것을 주저하게 만들고 있다. 소비자들의 온라인 정보에 대한 부정적인 편견을 해소하는 것이 중요함에도 불구하고, 이에 대한 연구들은 부족한 설정이다. 이를 위해서, 본 연구는 소비자들이 어떻게 온라인 정보를 인식하는지를 이해할 필요가 있음을 제안한다.

본 연구의 첫 번째 목적은 소비자들의 온라인 정보의 인식 과정을 묘사할 수 있는 연구 모델을 개발하는 것이다. 온라인 정보의 인식에 영향을 미칠 수 있는 요인들과, 이들이 어떻게 소비자들의 행동 의사에 영향을 미치는지가 본 연구모델에서 파악된다. 이러한 과정을 통해, 본 연구모델은 온라인 정보의 인식의 선행요인과 후행요인의 관계를 정보의 신뢰도의 관점에서 도시한다.

본 연구모델은 온라인 정보의 신뢰도의 인식은 네 가지 선행요인들과 관련된 변수들의 특징들에 의해 영향을 받을 수 있음을 제안하며, 이 요인들은 정보 제공자, 정보 전달 매체, 정보의 메시지, 그리고 정보 수용자의 개인적인 특징들이다. 또한, 본 연구는 온라인 리뷰의 신뢰도의 후행요인들로써 정보에 대한 믿음과 정보 수용자의 행동 의사가 제안한다. 본 연구모델을 바탕으로, 소비자들이 온라인 정보를 어떻게 수용하고 행동의사에 참조하는 지에 대한 과정을 도시하는 것이 가능하다.

본 연구의 두 번째 목적은 개발된 연구 모델을 온라인 소비자 리뷰에 적용하여 소비자들이 어떻게 리뷰를 제품에 대한 구매 결정을 위해 사용하는지를 설명하는 것이다. 본 연구가 리뷰를 연구 모델을 적용할 정보로 선정한 이유는, 리뷰가 제품 정보를 포함하고 있는 사용자 제작 콘텐츠로 인터넷에서 가장 널리 사용되고 있는 정보이며, 따라서, 소비자들의 온라인 정보의 인식 과정을 분석하기 위한 적합한 정보라고 판단했다.
기 때문이다. 또한, 온라인 쇼핑에서 리뷰의 중요한 역할을 고려할 때, 소비자들이 리뷰를 어떻게 인식하는지를 이해하는 것은 판매자들에게 중요한 과제이기도 하다.

본 연구는 제안된 연구 모델이 온라인 소비자 리뷰가 소비자들의 구매 의도에 어떻게 영향을 미치는지를 적절히 설명하는지의 여부를 확인하기 위해 온라인 실험들을 수행하였다. 본 연구의 실험 결과는 네 가지 선행요인들 중 두 가지, 즉, 리뷰어와 리뷰의 내용에 대한 인식이 소비자들이 리뷰의 신뢰도를 어떻게 평가하는지에 유의미한 영향을 미칠 수 있음을 제안한다. 이것은 소비자들이 그들 자신의 개인적인 특징들과 웹사이트와 관련된 특징들과는 무관하게 리뷰의 신뢰도를 인식하고 있음을 의미한다.

본 연구의 실험 결과로부터 제안되는 시사점들을 구체적으로 살펴보면 다음과 같다. 첫째, 리뷰어의 명성과 전문성 등 리뷰어의 우수성을 대표할 수 있는 특징들이 리뷰어에 대한 소비자의 인식에서 중요한 역할을 수행할 수 있음을 확인되었다. 둘째, 본 연구는 온라인 소비자 리뷰가 전달하는 제품 정보가 그 제품을 얼마나 잘 설명하는지의 정도, 즉, 제품과 리뷰 내용 사이의 관련성이 소비자들이 리뷰를 판단하기 위한 핵심적인 근거로 사용되고 있음을 제안한다. 이러한 결과는 정보 제공자의 특징과 이들이 전달하는 메시지의 내용이 소비자들이 정보를 수용할 지의 여부를 결정하는데 영향을 미치는 중요한 요인들임을 조사했던 선행 연구들과 일치한다. 셋째, 리뷰 신뢰도에 대한 높은 인식은 소비자들의 리뷰에 대한 믿음을 형성하는 것을 돕고 궁극적으로는 제품에 대한 구매의도를 제고할 수 있다는 것이 확인되었다.

본 연구의 추가적인 목표는 온라인 소비자 리뷰를 소비자들에게 접근하기 위해 사용하고자 하는 온라인 판매자들이 유용한 리뷰 활용 전략들을 개발할 수 있도록 지원하는 것이다. 본 연구 모델과 정보 처리에 대한 선행 연구들의 제안을 바탕으로, 본 연구는 판매자들이 이익을 얻을 수 있는 유용한 리뷰의 사용 방안들을 효율적으로 도출 가능한 이론적 체계를 수립한다. 본 체계는 8개의 상세한 리뷰 전략들을 제시하며, 비록 이들이 인터넷을 통해 소비자들과 교류하는 온라인 판매자들에게 가장 적합하지만, 통통적인 판매자들도 본 연구의 이론적 체계로부터 리뷰의 활용에 대한 의미 있는 통찰을 얻을 수 있으리라 기대한다.

핵심어: 온라인 소비자 리뷰, 정보의 신뢰도, 인터넷, 온라인 쇼핑