

Exploring the role of referral efficacy in the relationship between consumer innovativeness and intention to generate word of mouth¹⁾

Chul Woo Yoo · Sung Jin · G. Lawrence Sanders

Abstract Referral marketing plays an important role in promoting new products. When it comes to innovative agricultural products, early adopter's review or recommendation has a more critical impact on follower's purchase decision making. Hence, understanding of consumer's characteristics and needs play more important role in success of innovation. More particularly, other researchers pay attention to the role of consumer innovativeness. This study attempts to fill this gap in knowledge between innovative propensity of consumer and her/his intention to generate positive word of mouth about new agricultural products. Furthermore, in this paper, we adopt Vandecasteele and Geunes' motivated consumer innovativeness model to investigate consumer innovativeness in extrinsic motive and intrinsic motive level, and examine the moderating role of referral efficacy. For empirical verification, survey method is used for data collection. Partial least square (PLS) is adopted to analyze the data. Finally, several theoretical contributions and practical implications are discussed.

Keywords Word of Mouth, Referral Efficacy, Consumer Innovativeness, Agricultural Product, Structural Equation Model, Decision Tree,

C. W. Yoo · Sung Jin · G. Lawrence Sanders
Management Science and Systems
School of Management, University at Buffalo, USA

C. W. Yoo
e-mail: chulwooy@buffalo.edu (✉)

Sung Jin
e-mail: sjin5@buffalo.edu

G. Lawrence Sanders
e-mail: mgtsand@buffalo.edu

1 Introduction

Agricultural product lifecycles are shortened due to the quick change of technology development, consumer's lifestyle and demand. For that reason, companies invest their resource to support more frequent innovation that could satisfy the desires of their customers and make themselves more competitive (Hoffmann and Soyez 2010). To mitigate the possibility of failure, companies utilize innovative consumers (i.e., early adopters) who are the most influential consumer segment in innovation diffusion process. However, most of new products often fail in the market (Srinivasan et al. 2009).

Generally, innovation literature has focused on the adoption and diffusion of innovations (Greenhalgh et al. 2005 Rogers 1995 Wejnert 2002). In that research stream, many researchers investigate the organizational innovations and product characteristics. However, according to recent studies, understanding of consumer's characteristics and needs play more important roles in success of innovation (Hirschman 1980 Lassar et al. 2005 Venkatraman and Price 1990). More particularly, other researchers pay attention to the role of consumer innovativeness (Goldsmith and Hofacker 1991 Im et al. 2007 Steenkamp and Gielens 2003 Steenkamp et al. 1999).

As the study mentioned above, referral marketing plays an important role in promoting new products. When it comes to innovative agricultural products, early adopter's review or recommendation has a more critical impact on follower's purchase decision making (Childers 1986 Yoo et al. 2012 Yoo et al. 2008). In this sense, we could see the phenomenon that success or failure of innovation heavily relies on early adopter's review or word of mouth. However, the relationship between consumer's innovativeness that enables consumer to become an early adopter, and early adopter's importance in marketing perspective was not visited by researcher. In this regard, this study focuses on exploring the relationship

between consumer's innovativeness toward purchasing new product and intention to generate positive word of mouth.

In addition, we could guess that the real impact of word of mouth of early adopter could be made when early adopter has ability to express or explain the strength of the product. For that reason, some bloggers are famous for product reviews they post on their blog. Not every early adopter has strong impact on followers. The early adopter who has ability to make appealing word of mouth is effective in diffusion of the product.

Therefore, this study attempts to fill this gap in knowledge between innovative propensity of consumer and her/his intention to generate positive word of mouth about new agricultural product. Furthermore, in this paper, we adopt Vandecasteele and Geunes' motivated consumer innovativeness model to investigate consumer innovativeness in extrinsic motive and intrinsic motive level (Vandecasteele and Geuens 2010). Vandecasteele and Geunes' motivated consumer innovativeness model categorizes consumer innovative into four dimensions such as social, functional, hedonic, and cognitive. At this point, we suggest two research questions: (1) Do each of consumer innovativeness dimensions have a significant influence on consumer's intention to generate positive word of mouth? (2) Does referral efficacy play an important role in the relationship between consumer innovativeness and intention to generate word of mouth?

This study has three main contributions. First, we identify consumer innovativeness dimensions as factors that influence consumer's intention to generate word of mouth. By investigating these relationships, effective innovative factors could be examined. Second, this study explores the role of extrinsic and intrinsic motive in the model. According to the previous theory, even though extrinsic motive is effective in motivating behavior, behavior motivated by intrinsic motives shows stronger effect. This study could confirm this theory in innovation context. Third, the paper explores how referral efficacy moderates the relationship of core variables, consumer innovativeness dimensions and consumer's intention to generate positive word of mouth. By illustrating how marketing effect could be enhanced with referral efficacy, this contribution could be useful to companies that make innovative agricultural products.

The rest of this article is organized as follows. In the next section, we briefly introduce previous literature on consumer innovativeness, and word of mouth to explain the context and the theoretical position of the study. The study builds up the research model by briefly deriving several hypotheses to answer our research questions and test the relationship among variables.

Subsequently, we explain the measurement and analysis methods. This study presents results from instrument analysis, structural model analysis, moderating effect test, and decision tree method. Finally, we discuss results and contributions.

2 THEORETICAL BACKGROUND

2.1 Consumer Innovativeness

Studies on innovativeness are largely categorized in two research streams. First stream of studies regards innovativeness as personal trait. Midgley and Dowling is one of the pioneers to explore innovativeness as a generalized personality trait called "innate innovativeness" (Midgley and Dowling 1978). In this research stream, innovativeness is defined as "a generalized unobservable trait that reflects a person's inherently innovative personality, predisposition, and cognitive style and therefore can be applied to multiple situations" (Im et al. 2007).

Numerous studies have been completed on this approach. Steenkamp and Baumgartner (1992) investigated the relationship between innate innovativeness and new product adoption. The impact of consumer innovativeness on consumer's brand and product attitude was addressed (Limayem et al. 2000). Individual's risk aversion propensity was also considered in innate innovativeness framework (Shannon and Mandhachitara 2008). Kuo and Yen integrated TAM (Technology Acceptance Model) and innovativeness (Kuo and Yen 2009). Individual's innovativeness also turned out to have correlation with social influence (Cotte and Wood 2004). Income, and education also have positive relationship with innovativeness (Lennon et al. 2007, Steenkamp and Burgess 2002).

Second stream of studies rather emphasize interaction between consumer and product. For that reason, this approach is named domain-specific innovativeness. Domain specific innovativeness focuses on an individual's predisposition toward a product or service and adoption behavior within specific domain (Bartels and Reinders 2011, Goldsmith and Hofacker 1991).

For that innate characteristic of domain specific innovativeness approach, it has been applied in various domains. Information systems usage intention was investigated under innovativeness (Agarwal and Karahanna 2000). Purchase behavior was also explored under innovativeness approach (Agarwal and Prasad 1998). Ruvio and Shoham verified the relationship between opinion leadership and innovativeness (Ruvio and Shoham 2007). Innovativeness was addressed as ante-

cedent of social identity function (Grewal et al. 2000). Lu et al. studied the relationship between TAM and innovativeness (Lu et al. 2008). However, as I mentioned above, in spite of its importance, the relationship between consumer innovativeness and intention to generate word of mouth was not investigated.

2.2 Word of Mouth

WOM (Word of Mouth) refers to the dissemination of information such as consumer’s opinions and recommendations through various communication channels among people (Chen et al. 2011). Recently, EWOM (Electronic Word of Mouth) has also been investigated by researchers due to its powerful impact on consumer’s behavior and company’s performance. Interpersonal influence and WOM are regarded as the most important information sources when a consumer is making a purchase decision. These influences are especially important when it is difficult to evaluate prior to their consumption (Litvin et al. 2008).

Due to its importance, there have been numerous studies about WOM such as cultural value and WOM (Lam et al. 2009), difference between WOM and traditional marketing (Trusov et al. 2009), WOM and advertising (Keller 2007), and online store loyalty and WOM (Gauri et al. 2008). In the agriculture business area, it was shown that consumer-provided information is highly valued by recipients during their information searches and selection (House et al. 2008). In addition, recommendations of family and friends are proposed as one of the most important factor in choosing agricultural products (Heung et al. 2010).

Several previous studies regard electronic word of mouth (EWOM) as one of the important sources in choosing agricultural products (Andreassen and Streukens 2009 Rosen 2009). Hennig-Thurau and Walsh (2003) studied the motives for online word of mouth and its effects. The study found that the important review motivations were: diminution of risk, lowering of search time, acquirement of product consuming methods, curtailing purchase regret, compensation of imaginary community, searching for new products, and finding social status. Hennig-Thurau et al. (2004) also studied the motivation to post EWOM on the internet. The resulting factors were: social interaction desire, economic incentive, interest of other customers, strengthening of self-potential value. Gruen et al. (2006) viewed EWOM as know-how exchange among the customers, and suggested that opportunity, motivation and ability were preceding factors of EWOM. Furthermore, when EWOM was well managed, it was shown that it had positive effects on the

evaluation of the company by the customers and on the intention to repurchase.

A majority of studies on WOM have investigated the influence of WOM. However, some researchers have focused on customers creating WOM behavior (Bitner 1990 Gruen et al. 2006 Hennig-Thurau et al. 2004 Reichheld and Earl Sasser 1990 Yoo et al. 2013). For example, Wangenheim (2004) investigated the difference in creating WOM behavior among stayers and switchers. The role of opinion leadership in generating WOM is also dealt with (Richins and Root-Shaffer 1988).

Two most important WOM attributes studied in the literature are valence - which looks at whether the opinions from WOM are positive or negative (Herr et al. 1991), and volume which means the amount of WOM information (Bowman and Narayandas 2001). When a customer is satisfied with a service or product, s/he is likely to create and spread positive WOM (Bitner 1990 Reichheld and Earl Sasser 1990). However, opposite results can also be found. Some researchers argue the likelihood of generating negative WOM by dissatisfied customer (Schlossberg 1991 Westbrook 1987) compared to the opposite case of generating positive WOM by satisfied customer. Based on literature review, we found out efficacy of generating WOM is not investigated even though it could be critical as a motivator of WOM creation.

3 RESEARCH MODEL DEVELOPMENT

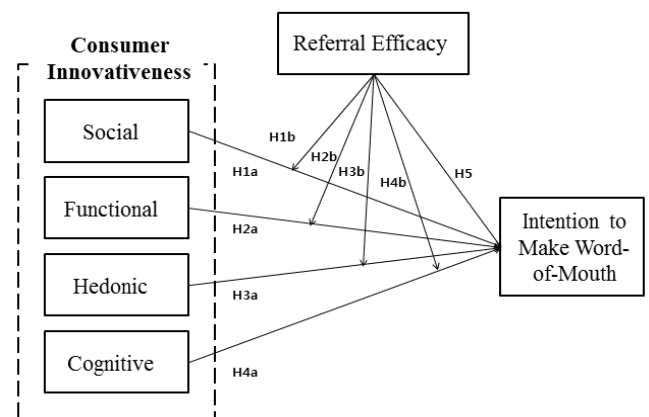


Fig. 1 Research Model

Fig. 1 shows the research model. This paper employs Vandecasteele and Geuens’s motivated consumer innovativeness model (Vandecasteele and Geuens 2010). As this paper examined in literature section, there are two streams of study on consumer innovativeness. Innate innovativeness focuses on personal predisposition. On the other hand, domain specific innovativeness approach

emphasizes the relationship between consumer and product. Vandecasteele and Geuens's motivated consumer innovativeness model attempted to integrate both approaches. Since this paper intends to investigate early adopter's innate propensity and the consequence of product use, that is, generating word of mouth behavior, the study employs Vandecasteele and Geuens's motivated consumer innovativeness model to investigate consumer innovativeness.

Vandecasteele and Geuens's motivated consumer innovativeness model consists of four motivations social, functional, hedonic and cognitive. Definition of each motivation is presented in Table 1. For example, when it comes to new food products, some people buy new type of food products because they want to show off, social reason. Some people love new organic food product because they can satisfy their health concerns like MSG usage or antibiotic usage, functional motive. Some people purchase new organic product since they love to have innovative product, hedonic reason. As the study instantiated above, there are many reasons why early adopter buy innovative agricultural product earlier than other. However, which types of reasons are strongly related with making viral marketing effect is unknown.

Relationships between four motivations and intention to generate word of mouth are hypothesized in the research model. For example, if certain consumer have enough innate social identity desire and purchased specific innovative product to present her/himself to her/his friends and neighbor, it could be assumed that this consumer is likely to have intention to introduce or recommend this product to others. In this regard, direct relationships between four motivation, such as functional, social, hedonic and cognitive, and intention to generate word of mouth are suggested in the model.

- H1a - Social consumer innovativeness positively influences intention to generate WOM.
 H2a - Functional consumer innovativeness positively influences intention to generate WOM.
 H3a - Hedonic consumer innovativeness positively influences intention to generate WOM.

H4a - Cognitive consumer innovativeness positively influences intention to generate WOM.

H5 - Referral efficacy positively influences intention to generate WOM.

In addition, this study adds another important variable, referral efficacy, in the research model. According to the literature, self-efficacy is the belief toward one's own ability to complete the task under certain environment (Bandura 1977). One's perception about own sense of self-efficacy significantly influences the way of attitude and expectation toward the goals.

In this paper, referral efficacy is defined as the belief that consumer think s/he has the ability and confidence to explain and recommend the innovative product well to others. If consumer has a weak referral efficacy, even though s/he has strong motivations, it is not assumed that s/he is likely to have intention to generate word of mouth. For example, there are two early adopters A and B who might have different degree of referral efficacy. A is a powerful review poster who has own famous blog. On the other hand, B only enjoys the product by her/himself. We could assume that even though they are both early adopter, their influence toward follower might be different. Referral efficacy should be considered as an important variable in referral success, by extension, in innovation success. Therefore, this employs referral efficacy as moderating variable in the model. We posit these hypotheses:

H1b - Referral efficacy moderates the relationship between social consumer innovativeness and intention to generate WOM.

H2b - Referral efficacy moderates the relationship between functional consumer innovativeness and intention to generate WOM.

H3b - Referral efficacy moderates the relationship between hedonic consumer innovativeness and intention to generate WOM.

H4b - Referral efficacy moderates the relationship between cognitive consumer innovativeness and intention to generate WOM.

Table 1 Definition of Innovativeness Variables (Vandecasteele and Geuens 2010)

Variable	Definition
Functional	Innovativeness motivated by the functional performance of innovations and focuses on task management and accomplishment improvement
Hedonic	Innovativeness motivated by affective or sensory stimulation and gratification
Social	Innovativeness motivated by the self-assertive social need for differentiation
Cognitive	Innovativeness motivated by the need for mental stimulation

4 METHODOLOGY

The unit of this study is the individual consumer. Measurement items for the research constructs were derived from prior studies and operationalized for our study. In order to check cleanness, the pilot test for these items was conducted in a graduate school seminar. We selected the most of the items for consumer innovativeness from Vandecasteele and Geuens's work (Vandecasteele and Geuens 2010). These constructs demonstrated substantial reliability and internal consistency. All details of the items are attached in Table 2.

We collected data in Korea since the e-commerce environment of Korea is very well developed, and customer's involvement in the Internet is prevalent (Yoo et al. 2013). For example, Korea has the largest percentage of wireless broadband users in the world (Osborne

2012). Korean e-commerce environment is considered to represent general customer behavior online. The respondents were asked to answer all the questions based on their experience, using a 1 - 5 Likert-type scale with an anchor of 1 for "strongly disagree" to 5 for "strongly agree." A total of 182 responses were gathered. Fifty-eightpercent of the respondents were female, and the majority of respondents was in their 30s and had a more-than-10-times experience with e-commerce.

5 ANALYSIS AND RESULTS

5.1 Measurement model assessment

A PLS analysis involves two stages: (1) the assessment of the measurement model, including the reliability and

Table 2 Measurement Items

Variables	Items
Social	I love to use innovative products that impress others.
	I like to own a new product that distinguishes me from others who do not own this new product.
	I prefer to try new products with which I can present myself to my friends and neighbors
	I like to outdo others, and I prefer to do this by buying new products which my friends do not have.
	I deliberately buy novelties that are visible to others and which command respect from others.
Functional	If a new time-saving product is launched, I will buy it right away.
	If a new product gives me more comfort than my current product, I would not hesitate to buy it.
	If an innovation is more functional, then I usually buy it.
	If I discover a new product in a more convenient size, I am very inclined to buy this.
	If a new product makes my work easier, then this new product is a "must" for me.
Hedonic	Using novelties gives me a sense of personal enjoyment
	It gives me a good feeling to acquire new products.
	Innovations make my life exciting and stimulating
	Acquiring an innovation makes me happier
	The discovery of novelties makes me playful and cheerful.
Cognitive	I mostly buy those innovations that satisfy my analytical mind.
	I find innovations that need a lot of thinking intellectually challenging and therefore I buy them instantly.
	I often buy new products that make me think logically.
	I often buy innovative products that challenge the strengths and weaknesses of my intellectual skills.
	I am an intellectual thinker who buys new products because they set my brain to work
Referral Efficacy	I have the necessary skills to explain and recommend new products to others.
	I have the necessary knowledge to explain and recommend new products to others.
	I have the necessary competencies to explain and recommend new products to others.
Intention to Generate WOM	I would recommend this product to others.
	I would post positive reviews about this product in the internet.
	I would recommend this product to other potential customers in the future.

discriminant validity of the measures, and (2) the assessment of the structural model. Individual item loadings and internal consistency were examined as a test of reliability (Gefen and Straub 2005). Individual item loadings that are greater than 0.7 are considered to be adequate. As shown in Table 4, loadings for measurement items are above 0.7, and close to 0.7 indicating that there is sound internal reliability. In addition, all the weights are statistically significant at $p < 0.01$. The almost uniformly distributed weights show each item contributes to each construct equivalently. In addition, we also investigated Cronbach's alpha for internal consistency. Table 3 shows that Cronbach's alpha for all constructs was greater than 0.7. The Average Variance Extracted (AVE) was also calculated. This shows the variance that a construct captures from its indicators relative to the variance contained in measurement error. This statistic is generally interpreted as a measure of reliability for the construct and as a means of evaluating discriminant validity (Gefen and Straub 2005). All AVEs for the constructs in our study were greater than 0.5. This indicated that 50% of the variance of the indicators could be accounted for by the latent variables. Also, if all composite reliability values are higher than 0.7, it can be concluded that that measurement has both internal consistency and convergent validity (Gefen and Straub 2005). According to the results shown in Table 3, all result values in this study are higher than 0.8, which means that the measurement model of this study has suitable composite reliability.

The AVE is also used to assess discriminant validity. The square root of AVE should be greater than the correlations among the constructs; that is, the amount of variance shared between a latent variable and its block of indicators should be greater than the shared variance between the latent variables. Table 3 shows the inter-correlations of the constructs and variance shared between the latent variables and their indicators. The diagonal elements in Table 3 are the square root of the

AVE. This showed that the square roots of each AVE value were greater than the off-diagonal elements. The measurement model, thus, had a reasonable degree of discriminant validity among all of the constructs. The results of the measurement analysis also indicated that all the constructs and measures have acceptable discriminant validity.

Table 4 Cross-Loading Table

	Cognitive	Functional	Hedonic	Social	R-Efficacy	Recommendation
CI1	0.732	0.279	0.594	0.324	0.387	0.412
CI2	0.804	0.476	0.459	0.462	0.383	0.369
CI3	0.806	0.350	0.365	0.266	0.457	0.313
CI4	0.796	0.359	0.342	0.246	0.437	0.300
CI5	0.857	0.444	0.418	0.405	0.497	0.312
FI1	0.373	0.837	0.342	0.533	0.235	0.302
FI2	0.527	0.843	0.457	0.430	0.460	0.359
FI3	0.316	0.765	0.321	0.321	0.350	0.309
FI4	0.146	0.673	0.204	0.292	0.087	0.103
FI5	0.283	0.729	0.310	0.415	0.314	0.218
HI1	0.368	0.327	0.721	0.454	0.200	0.424
HI2	0.212	0.215	0.645	0.358	0.240	0.297
HI3	0.400	0.374	0.860	0.454	0.253	0.455
HI4	0.498	0.399	0.827	0.469	0.351	0.547
HI5	0.595	0.395	0.783	0.501	0.401	0.509
SI1	0.488	0.545	0.513	0.794	0.386	0.448
SI2	0.291	0.359	0.456	0.845	0.189	0.377
SI3	0.269	0.430	0.456	0.783	0.240	0.343
SI4	0.344	0.411	0.428	0.798	0.163	0.267
SI5	0.272	0.325	0.431	0.720	0.116	0.302
RE1	0.467	0.356	0.279	0.243	0.922	0.398
RE2	0.560	0.412	0.427	0.308	0.934	0.459
RE3	0.461	0.398	0.348	0.263	0.918	0.450
IR1	0.434	0.320	0.499	0.401	0.532	0.897
IR2	0.223	0.240	0.398	0.275	0.180	0.671
IR3	0.399	0.365	0.578	0.440	0.410	0.917

Table 3 Reliability and Correlations

	Alpha	AVE	C.R	Cog.	Func.	Hedonic	Social	Efficacy	Rec.
Cognitive	0.86	0.64	0.90	0.80					
Functional	0.79	0.55	0.86	0.48	0.74				
Hedonic	0.83	0.59	0.88	0.56	0.46	0.77			
Social	0.85	0.62	0.89	0.43	0.54	0.58	0.79		
Efficacy	0.92	0.85	0.95	0.54	0.42	0.38	0.29	0.92	
Recommendation	0.78	0.70	0.87	0.44	0.37	0.59	0.45	0.47	0.84

*Diagonal values are square root of average variance extracted

In order to verify the discriminant validity in more detail, a cross-loading analysis was also conducted. As can be seen in the cross-loading table (Table 4), all the loadings of the constructs of the latent variables were over 0.7 or close to 0.7, and all the factor loadings were significant at a confidence level of 0.01. Furthermore, for other constructs the loadings (cross-loadings) were below 0.7. This shows that the measurement model of this study has strong discriminant validity.

5.2 Structural model assessment

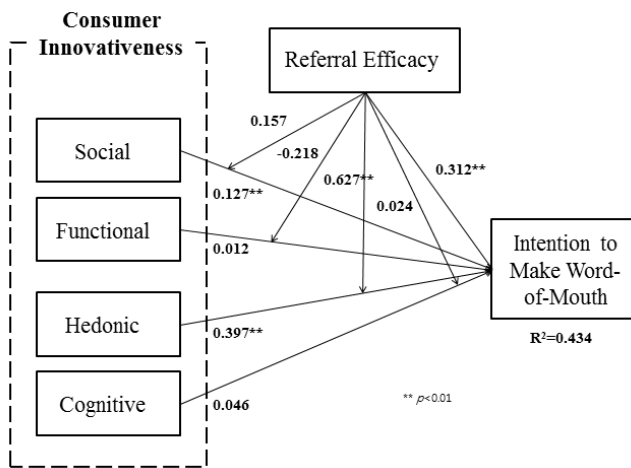


Fig. 2 Structural Model Results

The structural equation model proposed for this study is assessed, as shown in Fig. 2. With an adequate measurement model, the hypotheses were tested by examining the structural model. The R² value was used to assess the proportion of variance in the endogenous constructs that could be explained by the antecedent constructs. Approximately 43% of the variance in intention to make WOM was explained by four consumer innovativeness factors and referral efficacy, making the interpretation of the path coefficients meaningful. The results confirmed the direct relationship between consumer innovativeness, referral efficacy, and WOM generation. According to the results, social consumer innovativeness is a significant factor affecting WOM generation, hedonic consumer innovativeness has an influence on WOM creation, and referral efficacy has a strong impact on WOM generation. The path coefficients from the PLS analysis are shown in Fig. 2. The coefficients in the model represent standardized regression coefficients.

After computing path estimates in the structural model, the PLS software was used to perform a bootstrap to obtain the corresponding t-values. Support for each hypothesis can be determined by examining the sign (positive or negative) and the statistical significance

for the t-value for its corresponding path. H1a, H3a, H3b, and H5 are accepted with a significance level of 0.01, as represented in Fig. 2.

5.3 Moderating effect

PLS results show the moderating effect of referral efficacy (H3b) in hedonic consumer innovativeness and intention to recommend is significant. Fig. 3 illustrates the change of relationship between hedonic consumer innovativeness and intention to recommend according to the level of referral efficacy in generating WOM. It shows the complementary relationship between referral efficacy and hedonic consumer innovativeness. According to Fig. 3, regardless of hedonic consumer innovativeness level, respondents with low self-efficacy in generating WOM hardly have intention to recommend agricultural products that they bought. However, people with high referral efficacy in generating WOM show high willingness to recommend the agricultural products that they bought. In addition, they still show positive answer to generating WOM even though there is low level of hedonic consumer innovativeness. These results imply that referral efficacy is a critical determinant in promoting the WOM behavior.

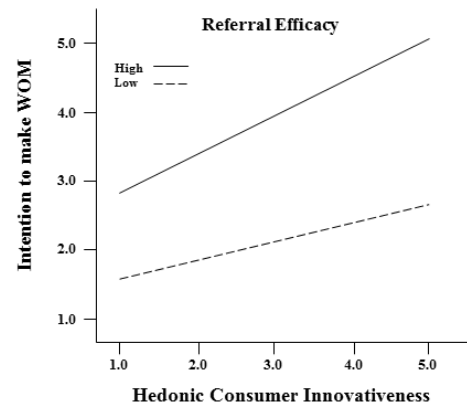


Fig. 3 Moderating Effect Test

5.4 Ad-hoc analysis

In this study, we conducted the ad-hoc analysis by adopting the decision tree method. This approach allows research to explore the priority of factors on dependent variable. These findings cannot be made through structural equation model that only provides significance of the influence of the factors. Decision tree method has been often utilized in decision analysis studies (Thomas and Galambos 2004). In the analysis, we transformed the five point Likert scale data into categorical data (i.e., "0" for low score and "1" for high score) because we

can make more understandable findings with small ranged variables, compared to 1-5 point value. Branches are made to the third level to focus on the important factors. According to the results, Figure 4 presents that 113 respondents show high intention to make positive WOM after purchasing the innovative agricultural products, and 69 respondents indicate low intention. And the decision tree model shows that the most important criterion is referral efficacy in generating WOM decision making. And for respondents who show high referral efficacy, social consumer innovativeness turns out to be a second important factor in decision making. For respondents who show low referral efficacy, social consumer innovativeness turns out to be a second important factor. Other detailed information is provided in the model. Finally, this decision tree model also provides that even though hedonic consumer innovativeness and referral efficacy has a complementary relationship, referral efficacy is more prioritized in generating WOM decision making, compared to hedonic consumer innovativeness.

6 DISCUSSION

This study attempts to investigate the influence of consumer innovativeness on WOM generation, and moderating role of referral efficacy on the relationship between consumer innovativeness and WOM generation in the agricultural product context. Lined with referral efficacy four antecedents, social consumer innovativeness, functional consumer innovativeness, hedonic consumer innovativeness, and cognitive consumer innovativeness, are adopted to see how individual propensity toward innovativeness influence WOM generating behavior. Additionally, surveys measurements are designed for the empirical examination. The proposed theoretical model

on WOM generation is supported by partial least square analysis results and the diagnostic tests using data collected from Korean consumers. These tests have yielded a rich set of insights into how consumers determine the WOM generation while considering their efficacy in generating WOM and individual propensity of innovativeness.

First, the findings of this study offer important contributions to the literature of WOM behavior. According to previous literature on WOM, Hennig-Thurau et al. (Hennig-Thurau et al. 2004) argue the antecedents of WOM generation with social interaction desire, economic incentive, interest of other customers, strengthening of self-potential value. Gruen et al. (Gruen et al. 2006) present factors, opportunity, motivation and ability, as preceding factors of EWOM. However, no study examines the consumer innovativeness as an important factor that leads to WOM generation. Recently, early adopter's review or word of mouth has a critical influence on success or failure of innovation. Investigating the consumer innovativeness provides the understanding on consumer characteristics and its impact on other consumers' behaviors. According to our analysis, consumers with social and hedonic innovativeness are likely to create good WOM after purchasing the innovative agricultural products.

Secondly, this study extends the understanding of efficacy theory involving the WOM generation by testing the moderating role. According to our analysis, referral efficacy has a significant moderating role in hedonic consumer innovativeness and WOM generation. When consumers have high referral efficacy, they are likely to participate in WOM creation. This moderating effect shows the importance of individual ability in making the WOM phenomena. Ad-hoc analysis with decision tree method also supports these findings.

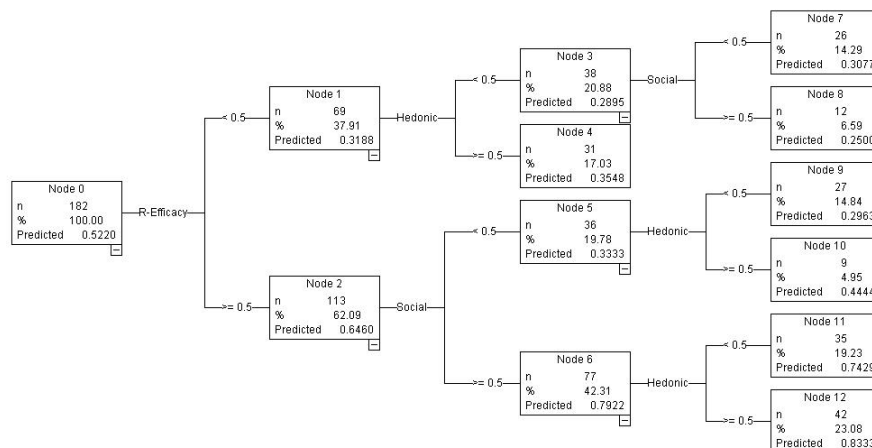


Fig. 4 Decision Tree Analysis Results

6.1 Managerial Implications

Our findings suggest at least two directions for effective management of consumer innovative propensity and WOM channel. First, results show consumers with social consumer innovativeness and hedonic innovativeness are likely to generate good WOM after purchasing innovative products. Each consumer has different characteristics on innovative products and innovativeness. When developing the concepts of product, or direction of marketing promotions, considering the propensity of targeted consumers can be critical to product sales. Because consumers with social and hedonic innovativeness tend to have intention to generate WOM, concepts of product or marketing directions that satisfy these types of consumers should be considered. In order to promote the good WOM generation, companies need to investigate the motivation of consumers by using simply survey question, that kind of information can be very useful to categorize the consumers and continuing the follow up WOM management.

Second, Ability to engage in discussion forum, consumer review site, or opinion leadership activity is considered as an important factor in generating EWOM (Gruen et al. 2006). Our analysis presents that utilizing the impact of consumer innovativeness to promote WOM behavior can be failed without considering consumer's referral efficacy because referral efficacy is one of the important factors engaged in this phenomenon. In a similar way, knowledge, skill or confidence of consumer in making WOM is should be considered by companies. The significant moderating effect of referral efficacy in hedonic innovativeness and WOM generation indicates that when the channel of WOM is designed or managed consumer friendly, its effect could be maximized.

6.2 Limitation and Future Direction

We note limitations to our work that should be taken into account when generalizing the results. This study was conducted in Korea, which has different cultural factors, national-level sensitivity toward WOM generation, and consumer innovativeness compared to western countries. Therefore, the subjects could be biased in their behavior and responses with respect to the analyzing the individual propensity such as consumer innovativeness. Hence, care must be taken when generalizing these findings to patients in other social, economic, and cultural environments.

7 CONCLUSION

This study sheds light on several important phenomena (WOM generation, consumer innovativeness, and referral efficacy), contributing to our enhanced understanding of WOM generation behavior in terms of consumer innovativeness and referral efficacy. Moreover, integrating the moderating role of referral efficacy helps clarify the process of how the WOM occurs to individual's decision making. We hope that this study will encourage researchers to identify and examine the WOM phenomena.

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