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An Empirical Study on the Innate and Domain-specific Consumer Innovativeness on Cooking Intention: Application of TAM

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Abstract

Supposing innovative new TV programs satisfy the needs of viewers, they have become popular and had effects on the behavior intention of viewers. Unlike outdated cooking TV programs, newly emerging cooking shows with professional chefs and famous personalities generate a perception that cooking is fun, easy, useful, and playful. Considering this point, this study investigates the relation of innate consumer innovativeness and domain-specific innovativeness and explores cooking innovativeness effect on the cooking intention by applying the technology acceptance model. The results confirmed that cognitive and sensory innovativeness as innate innovativeness have positive effects on cooking innovativeness as domain-specific innovativeness and cooking innovativeness has positive impacts on perceived ease of use, perceived usefulness and cooking intention. Also, perceived ease of use have positive impacts on perceived usefulness, which have impacts on cooking intention. Thus, viewers with cooking innovativeness realize that proposed recipes are easier and more useful, and then they are willing to use these recipes to cook.

Keywords: *Consumer Innovativeness, Technology Acceptance Model, Perceived Ease of Use, Perceived Usefulness*

1. Introduction

100 powerful people in Korean culture selected the cooking shows, “Cook Bang”, as Korea's best culture product of 2015 beyond movie watched by 10 million people such as ‘Assassination’ and ‘Veteran’. Cooking shows have become more interesting and more truthful than previous cooking programs, which just suggested cooking recipes. These new programs focus on the delicate cooking process through proficient chefs and indirect experience through popular people like idols and entertainers. Viewers can, not only experience cooking recipes but can also enjoy fascinating cooking with renowned people. These cooking shows make the viewers perceive that cooking is funny, convenient, valuable and charming. After all, the viewer could try cooking and utilizing recipes from cooking shows.

Previous research in broadcasting sectors only suggest review intention of viewers in specific TV programs like sports [1-4], and so on. These studies are only focused on motivational factors in TV programs. However, this study investigates the effect of consumer innovativeness on cooking intention through the cooking shows.

Also, viewers are consumers of them in TV programs. Therefore, consumer innovativeness is an important factor on cooking intention. Consumer innovativeness is overall innate innovativeness and indicates innovative consumer behavior and intention [5]. Related literatures suggest that consumer innovativeness largely divided innate consumer innovativeness and domain-specific innovativeness.

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Innate innovativeness has cognitive and sensory innovativeness and domain-specific innovativeness is innovativeness in about one or more category. This study focuses on cooking innovativeness.

Previous research in Technology Acceptance Model (TAM) suggest that consumers' acceptance of a new technology is influenced by mainly on its usefulness and secondarily by the ease of utilizing its function [6]. The acceptance of cooking skill is also influenced by its perceived usefulness and ease of use.

Considering these points, this study investigates that cognitive and sensory innovativeness as innate consumer innovativeness has an influence on the innovativeness as domain-specific innovativeness. After that, this study tries to examine cooking innovativeness towards cooking intention by TAM [6].

2. Theoretical Background

2.1. Consumer Innovativeness

Consumer innovativeness is common innate innovativeness and points out innovative consumer behavior and intention [5-7]. It can be theorized as the tendency to buy new product and service, or to accept technology and skill soon after they emerge in the market and relatively earlier than other people [8-10]. This consumer innovativeness is an essential construct to diffusion of new product or technology and has an important role in increased earnings of business and industry under severely competitive circumstance [9-13]. Recent researches suggest this innovativeness as multidimensional with cognitive and sensory innovativeness and so on [13-15].

Consumers with cognitive innovativeness have a tendency to like new experiences that stimulate rationality [13-14]. They are driven to inspire the mind by searching for new experiences or making decisions. They enjoy thinking, problem solving, wondering over subjects and other mental efforts [15-16]. Consumers with sensory innovativeness, in contrast, are inclined to new experiences that inspire the senses. These experiences include internally generated new experiences such as fantasy and externally obtainable new exciting and thrilling activities [5], [13] and [16-17]. They focus on aesthetic value of new products and technology [16] and [18-19].

Nasution and Garnida [13] classified three streams in consumer innovativeness as innate consumer innovativeness, as domain-specific innovativeness, and both of them. Innate consumer innovativeness does not vary from one to another context. Innate innovativeness defined as "*predisposition to buy new and different products and brands rather than remain with previous choices and consumer patterns*" [18]. Roehrich [9] proposed some explanations as stimulation need, novelty seeking, independence toward communication experience, and need for uniqueness.

In contrast, consumers with low domain-specific innovativeness toward one category will show high domain-specific innovativeness toward others. Domain-specific innovativeness defines the tendency to absorb about and accept novelties within a specific domain of interest, and, therefore carries innovativeness more specific to a sector of interest [20].

This study explores that cognitive and sensory innovativeness as innate innovativeness influence cooking innovativeness as domain-specific innovativeness in cooking shows. Therefore, this study suggests hypothesis as following.

H1. Cognitive Innovativeness will have positive effect on Cooking Innovativeness.

H2. Sensory Innovativeness will have positive effect on Cooking Innovativeness.

2.2. TAM; Perceived Ease of Use and Usefulness

The TAM has two fundamental constructs about a new technology, perceived ease of use and perceived usefulness, have effect on a consumers' intention to adopt a new technology [6]. Perceived ease of use is well defined as "the degree to which a person believes that using a particular system will be free of effort", while perceived usefulness is well defined as "the degree to which a person believes that using a particular system will enhance his or her job performance" [6]. As said by TAM, users' acceptance of a new technology was influenced primarily by its usefulness and secondarily by the ease of utilizing its function [6]. The predictive feasibility and tightfistedness of the TAM allow researchers to use it to various situations and to analyze and comprehend different adoption behaviors and intention [21-22].

Some literatures investigated antecedents and determinants for new technology adoption. These antecedents and determinants are experience, education, personal innovativeness, job trait, motive, self-efficacy, personal traits and so on. Personal innovativeness is one of the important concepts for examining the acceptance of information technology innovations [23]. This personal innovativeness is domain-specific innovativeness in information technology. Like this, consumer innovativeness has an important role on adopting the cooking skill suggested by TV programs. Consumer innovativeness is generally favorable for new technology and influences the belief of adoption intention of new technology [24-25].

This study examines that cooking innovativeness has impacts on cooking intention with mediating perceived ease of use and perceived usefulness. Hence, this study proposes hypothesis as following.

H3. Cooking Innovativeness will have a positive effect on Perceived Ease of Use.
H4. Cooking Innovativeness will have a positive effect on Perceived Usefulness.
H5. Perceived Ease of Use will have a positive effect on Perceived Usefulness.
H6. Cooking Innovativeness will have a positive effect on Cooking Intention.
H7. Perceived Ease of Use will have a positive effect on Cooking Intention.
H8. Perceived Usefulness will have a positive effect on Cooking Intention.

3. Methodology

Table 1. Measurements

Construct	Item	Previous Research
Cognitive Innovativeness	CI1. Find out the meaning of words I don't know. CI2. Figure out the shortest distance to destination. CI3. Think about different ways to explain the same thing CI4. Try to figure out the meaning of unusual statements	[6],[5], [17],[20].
Sensitive Innovativeness	SI1. Like to subscribe the newly magazine about hot items. SI2. Buy new products matching me. SI3. Like the fresh colorful clothing. SI4. Prefer design to function.	
Cooking Innovativeness	DI1. Enjoy cooking with new foodstuff. DI2. Try to new recipe. DI3. Eating delicious cuisine, the curiosity of recipe arises. DI4. Like to visit new restaurants compared to others.	

Perceived Ease of Use	PE1. Proposed recipes through Cook Show are easy to utilize other recipe. PE2. The traits of stuff through Cook Show are easy to know. PE3. Proposed recipes through Cook Show are easy to use.	[6], [21], [22], [24], [25].
Perceived Usefulness	PU1. Proposed recipes through Cook Show improve my cooking skill. PU2. Through Cook Show, I could gain various recipes. PU3. I utilize information through Cook Show in real life.	
Cooking Intention	IN1. Intend to utilize the proposed recipe through Cook Show. IN2. Intend to cook the proposed foodstuff through Cook Show. IN3. Intend to eat the food cooked by proposed recipe through Cook Show.	[20], [21].

In order to investigate the hypotheses, a survey was performed. The survey questions are presented in the Table 1. 6 constructs were included in questionnaire. This study measures the constructs using multi-item scales adapted from the previous literature. A 7-point Likert scale was used.

A total number of 200 questionnaires were answered by viewers of various Cooking TV programs. This study used a final sample of 198 respondents eliminating the 2 with missing data.

The research model of this study is suggested in Figure 1.

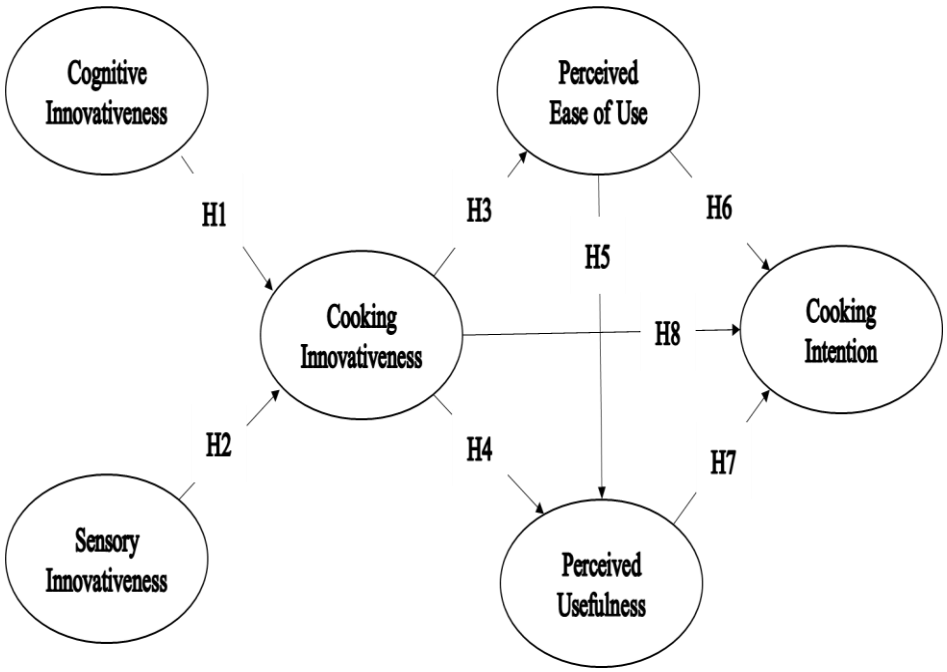

Figure 1. Research Model

4. Results

4.1. Reliability and Validity of Measures

Table 2. Convergent Validity and Reliability

Variables	items	Estimate	Std. Estimate	S.E.	C.R.	Composite Reliability	AVE
Cognitive Innovativeness	CI1	1	0.835			0.782	0.564
	CI2	0.529	0.426	0.092	5.726		
	CI4	0.945	0.901	0.118	8.009		
Sensory Innovativeness	SI5	1	0.788			0.790	0.565
	SI3	0.993	0.884	0.113	8.826		
	SI2	0.680	0.542	0.094	7.201		
Cooking Innovativeness	DI1	1	0.815			0.836	0.630
	DI2	0.947	0.781	0.084	11.325		
	DI3	1.050	0.785	0.092	11.39		
Perceived Ease of Use	PE1	1	0.772			0.808	0.584
	PE2	0.893	0.757	0.090	9.864		
	PE3	0.991	0.763	0.100	9.922		
Perceived Usefulness	PU1	1	0.679			0.790	0.557
	PU2	1.065	0.757	0.117	9.121		
	PU3	1.178	0.799	0.124	9.505		
Cooking Intention	IN1	1	0.874			0.918	0.789
	IN2	1.014	0.885	0.060	16.991		
	IN3	1.088	0.904	0.062	17.619		
χ^2=191.678, df=120, χ^2/df=1.597, GFI=0.906, AGFI=0.866, CFI=0.960, NFI=0.902, TLI=0.961, RMSEA=0.055							

The Measurement model and Structural model were examined by AMOS 22.0 and SPSS 22.0. To test validity, a confirmatory factor analysis was performed. A confirmatory factor analysis was performed to investigate validity. Confirmatory factor suggests good fitness between the data and the construct of scale (χ^2=191.678, df=120, χ^2/df=1.597, GFI=0.906, AGFI=0.866, CFI=0.960, NFI=0.902, TLI=0.961, RMSEA=0.055).

Measures of questionnaire show standard factor loadings, composite reliability, and average variance extracted (AVE) as Table 2. Composite reliability of all constructs ranged from 0.782 to 0.918, exceeding the 0.7 criterion. AVEs of each latent factor ranged from 0.564 to 0.789, more than 0.5. Therefore, constructs are distinct and item validity and reliability is sufficient.

Table 3. Discriminant Validity

	(1)	(2)	(3)	(4)	(5)	(6)
Cognitive Innovativeness (1)	0.751					
Sensory Innovativeness (2)	0.174	0.752				
Cooking Innovativeness (3)	0.234	0.241	0.794			
Perceived Ease of Use (4)	0.121	0.225	0.551	0.764		
Perceived Usefulness (5)	0.105	0.255	0.554	0.574	0.747	
Cooking Intention (6)	0.065	0.295	0.366	0.392	0.558	0.888
The square root of the average variance extracted (AVE) values are presented on the diagonal and Correlations are below diagonal.						

As Table3, the square root of the AVE of each construct was larger than the correlations of other specific constructs and ranged from 0.747 to 0.888 exceeding the 0.7 criterion. [26]. Thus, discriminant validity is satisfied.

4.1. Path Analysis and Hypothesis Test

The structural model generated acceptable goodness-of-fit-measures (χ^2=198.595, df=126, χ^2/df=1.576, GFI=0.902, AGFI=0.867, CFI=0.960, NFI=0.899, TLI=0.951, RMSEA=0.054). Accordingly, these results indicated that the structural model presented acceptably fitted the data.

Table 4 and figure 2 shows the results of hypothesis in this study. H1 and H2 stated that cognitive and sensory innovativeness will have a positive effect on cooking innovativeness. The results supported the hypothesis, with a significant path coefficient of 0.154 (p=0.056) and 0.264 (p<0.01).

Table 4. Results of Hypothesis Test

Hypothesis		Std. Estimate	S.E.	C.R.	p-value	Result
H1	Cognitive Innovativeness ⇒ Cooking Innovativeness	0.154	0.083	3.131	0.056*	Supported
H2	Sensitive Innovativeness ⇒ Cooking Innovativeness	0.263	0.085	1.909	***	Supported
H3	Cooking Innovativeness ⇒ Perceived Ease of Use	0.663	0.074	7.465	***	Supported
H4	Cooking Innovativeness ⇒ Perceived Usefulness	0.447	0.102	3.998	***	Supported
H5	Perceived Ease of Use ⇒ Perceived Usefulness	0.403	0.082	3.747	***	Supported
H6	Perceived Ease of Use ⇒ Cooking Intention	-0.124	0.120	-1.164	0.503	Rejected

H7	Perceived Usefulness ⇒ Cooking Intention	0.661	0.161	5.093	***	Supported
H8	Cooking Innovativeness ⇒ Cooking Intention	0.331	0.094	3.306	***	Supported
χ^2=198.595, df=126, χ^2/df=1.576, GFI=0.902, AGFI=0.867, CFI=0.960, NFI=0.899, TLI=0.951, RMSEA=0.054 *p<0.10, ***p<0.01						

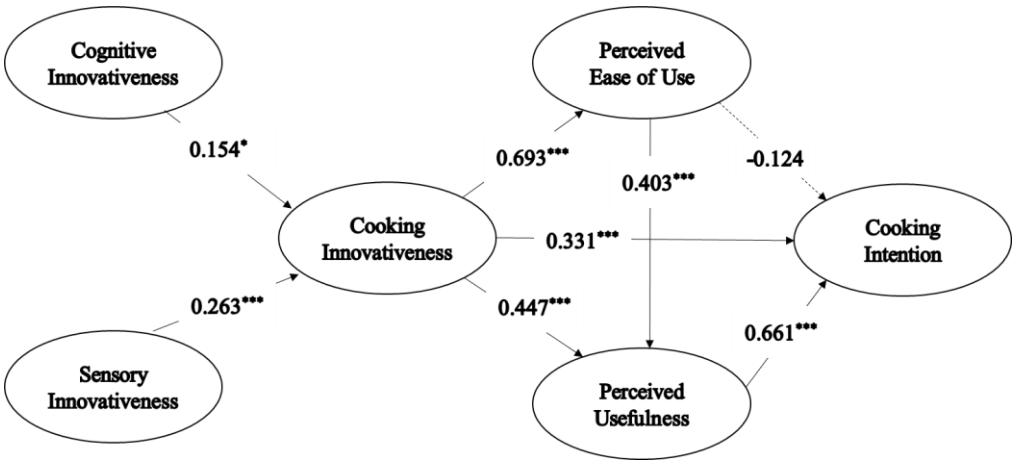

Figure 2. Results of Hypothesis Test

Cooking innovativeness is found to have a positive effect on perceived ease of use and perceived usefulness, with a significant path coefficient of 0.693 (p<0.01) and 0.447 (p<0.01). Therefore, H3 and H4 are supported. Also, perceived ease of use is found to have a positive effect on perceived usefulness with a significant path coefficient of 0.403 (p<0.01). Thus, H5 are supported.

Cooking innovativeness has a positive effect on cooking intention with significant path coefficient of 0.331 (p<0.01). Also, perceived usefulness is the most important factor for predicting on cooking intention, with significant path coefficient of 0.661 (p<0.01). However, perceived ease of use has a negative effect on cooking intention with insignificant. Thus, H7 and H8 are supported, and H6 is rejected.

According to the results, consumer innovativeness of viewers, who are consumers of TV programs, has an important role to directly adopting the skills provided in the TV programs. Specifically sensory consumer innovativeness is more important factor than cognitive innovativeness in cooking innovativeness. Also, cooking innovativeness is key factor in TAM and has positive effects on perceived ease of use, perceived usefulness, and cooking intention.

Moreover, perceived ease of use has indirect effects on cooking intention but perceived usefulness has direct effects on cooking intention. This results show that consumer considers perceived usefulness as an important when adopting a new skill

5. Conclusions

TV programs impact on our lives closely. TV programs try to recommend cool and convenient information to its viewers and to gain more positive followers and higher audience rating. This study suggests some implications to provide in-depth insights for effects of consumer innovativeness on the new skill adoption in TV programs.

First, cooking innovativeness has directly and indirectly a great influence on cooking intention. Cooking innovativeness is a core antecedent of cooking intention. Cooking shows are focused on target viewers such as viewers which are willing to cooking in life. If cooking shows gain these viewers' advocacy, they could ensure their audience rating and gain favorable sponsor for their programs. Therefore, TV programs need to give specialized information for these favorable viewers and to arouse graciously telling viewers.

Second, some previous researches in consumer innovativeness examined new product or technology adoption of information technology. But this study examined that consumer innovativeness has impacts on adoption intention of cooking skill. Furthermore, this study splits innate innovativeness as antecedents and domain-specific consumer innovativeness as key factor in research model. To do so, this study is found that innate consumer innovativeness (cognitive Innovativeness and sensory innovativeness) has effects on cooking innovativeness and sensory innovativeness is more powerful effects on cooking innovativeness than cognitive. This result reaffirms that domain-specific innovativeness is affected by innate consumer innovativeness as previous researches.

Third, some previous studies using TAM suggested mainly adoption intention of information technology. On the other hand, this study applied TAM to adoption intention of cooking skill unlike the information technology. Specifically, perceived ease of use has directly no effects but indirectly positive effects on cooking intention. And perceived usefulness has direct effects on cooking intention. As previous researches, these two constructs are core determinants of individuals' intention to cooking. This implies that if viewers perceive recipes easy and useful, they will have more positive intention to cooking in real life. Ultimately this behavior intention will have impacts on reviewing intention on TV program. Therefore, This results show that viewers consider perceived ease of use and perceived usefulness as important when adopting a new skill.

The limitations of this study are to be restricted to Korea consumers and cooking innovativeness and to disregard the additional adoption factors such as motive, trust, playfulness, satisfaction, and self-efficacy. Thus, future studies extend other countries and other domain-specific innovativeness and consider other additional factors. Since TV program need to gain higher audience rating, review intention is important factor to the persons concerned in TV program. Future studies also consider this factor as outcome measures. Finally, to measure suitable constructs, systematic questionnaire should be established.

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