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Effects of Value Inclination of the Producers on Production Intention of Environment-Friendly Products: Mediation Effects of Perceived Public Certification and Shared Value

¹Hoe-Chang Yang, ²Young-Sam Oh

¹ First Author Dept. of Distribution Management, Jangan University, Republic of Korea

² Corresponding Author Dept. of Distribution Management, Jangan University, Republic of Korea.

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Abstract

This study attempted to identify the effects that would be brought about by the value inclination of agricultural and livestock products producers upon the intention to produce environment-friendly products. In this study, We analyzed the data used in Yang et al.(2014) with producers of agricultural and livestock products in Incheon-si and Gyeonggi-do. Total of 149 valid questionnaires were corrected and value inclination as divided into individualism orientation and collectivism orientation, it has been tried to identify whether the intention to produce environment-friendly products would vary with producer's orientation or not. According to the analysis result, individualism, collectivism perceived public certification and shared value were positive effect on production intention of environment-friendly product. This can be said to have been an attempt to establish a more effective and specific strategy through identifying the characteristics of producers that must be considered first of all in the process of establishing policies.

Keywords: Value Inclination, Production Intention, Environment-Friendly Product, Perceived Public Certification, Shared Value.

1. Introduction

Development in producing capitalistic goods has been pushing ahead the modernization strategy for promoting efficiency as in utilizing mechanization and chemical processes, facilities improvement, scaling-up, etc., and as a result, such negative results as environmental contamination and environmental destruction have been brought into relief as well as the positive result of supplying abundant food. Moreover, the recent situation is that the problems faced by our country's agricultural and livestock products producers such as reduction in production, income decrease, weakened food security, expanded interregional inequality, etc., are being exacerbated due to such natural impact as global warming and in the aftermath of the free trade that has been diffused over to primary industry products. Therefore, both the central and local governments are investing an enormous amount of funds making a continued effort to secure the competitiveness of the producers of agricultural and livestock products, whereas a number of producers at production sites also keep trying to overcome their difficulties.

In view of the market changes being made to overcome the recent situation, a number of launched products can be seen with the consumers' needs for environmental friendliness being emphasized in the food corners of retail stores. And researcher have been presenting a number of study results focusing on the consumers who are relevant to the consumption of environmentally friendly products (e.g. Goh et al., 2010; Hwang et al., 2013; Lee et al., 2013; Kim et al., 2013). But, it is truly difficult to search out any papers that are relevant to an individual's characteristics, situation and value orientation with regard to the production of environmentally friendly products from the standpoint of producers. And this is construed to be caused by the fact that there are various limitations in carrying out studies aimed at producers. However, studies on those producers who are the principal agent for establishing and managing policies and for injecting enormous funds will have to be the basic conditions for policy establishment and management.

Therefore, first of all in this study, attempts have been made to identify the effects that would be brought about by the value inclination of agricultural and livestock products producers upon the intention to produce environment-friendly products. Specifically by differentiating the value inclination as divided into individualism orientation and collectivism orientation, it has been tried to identify whether the intention to produce environment-friendly products would vary with producer's orientation or not. Also, attempts have been made to identify the effects that producers' value inclination and intention to produce would be affected by the perception on the necessity of public certification for producing environment-friendly products as well as by the degree of sharing social value that is intended to solve problems caused by environmental contamination and to hand over a healthy globe to descendants.

Such results are expected to provide several implications for achieving successes on policies of both the central and local governments by identifying the factors that promote producers' production intention. In particular, by identifying the factors that are regarded as important by producers, expectations and needs of producers would be reflected from the stage of establishing policies.

2. Literature review

The concept of individualism and collectivism is one of those that have been discussed about in many ways. In addition, through making systematic definitions about the cultural concept that had been a conundrum of cross-cultural psychology by relating psychological phenomena to cultural dimensions, a theoretical framework has been provided in this area (Rohner, 1984). According to what has been arranged by Park & Lee (1999), Cho et al. (2005), Choi et al.(2014) and Yang et al.(2013), Triandis (1989) is known to have said that in the collectivism culture, the views, demands and purposes of not individuals but a collective body are viewed to be important emphasizing that cooperation among members of a collective body, etc. is important as a belief that is being shared internally in the collective body, while it is emphasizing the social norms and responsibilities that have been determined already by the collective body. On the contrary, it was said that individualism would regard the views, purposes and demands of not others but the individual itself to be important and that an individual's will, satisfaction, joy and its unique belief, etc. are regarded to be important rather than the social norms and responsibilities defined by others (Park & Lee, 1999; Cho et al., 2005). Therefore, such differences in producers' orientation will make differences of individuals also in the production of environmentally friendly products, and will affect the perception on public certification like HACCP and the value sharing that is relevant to environmental friendliness as well.

Public certifications on agricultural food products in our country are viewed as those in the following. First, since the introduction of the quality certification system for agricultural and marine products in 1992, the Ministry of Agriculture, Food, and Rural Affairs has been reorganizing the certification system for agricultural food products in order to provide consumers with reliability as well as to make a quality control system realized for the benefit of producers (Park, 2014). For instance, the control system of the Hazard Analysis Criteria Control Point (HACCP), which is focused on hazardous factors and recognized as the best sanitary control technique while being able to guarantee the food safety, is currently playing the most important role for securing products' sanitary control and safety, taking a dominant position within the country (Green Table. 2012). Viewing the preceding studies on such public certification, as in the case that a higher degree of consumers' perception on public certification will affect more on their purchase intention, the possibility that producers' production intention would be affected by their perception on public certification will be high.

Shared value is the concept of creating social value (CSV) that has been presented by Porter & Kramer (2011) as an alternative against the limitations of an enterprise's CSR (Corporate Social Responsibility), and CSV refers to policies or modes that will create an enterprise's economic profits and at the same time, will enhance the economic and social conditions of the community to which the enterprise belong. In other words, CSV is asserted to be able to obtain economic profits while being able to seek the social value. Viewing from such a standpoint, producers' sharing of the value that is relevant to the production of

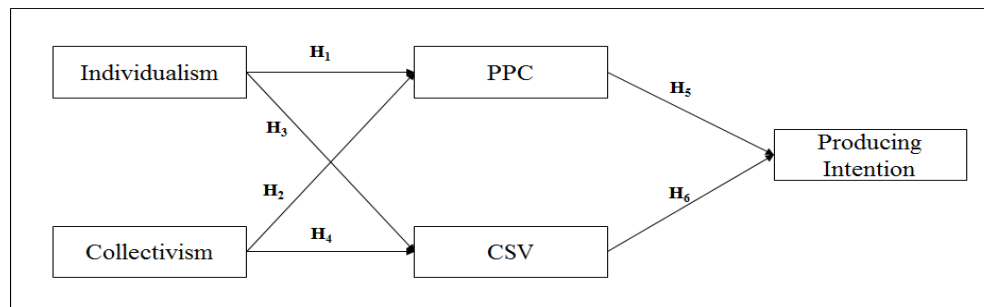
environmentally friendly products may provide the possibility for creating economic profits while being able to seek the social value.

Intention is an individual's planned future behavior, and is meant by the probability that belief and attitude are shifted to a behavior (Engel et al., 1983; Yoon & Yoon, 2013), while just as the use intention is composed of motivating factors affecting a behavior and is defined as the expression of the efforts for practicing a behavior, the production intention can be defined as the expression of the various efforts for practicing production activities. Therefore, there's a high possibility that producers' production intention to produce environmentally friendly products would be affected by various variables.

Viewing upon the basis of the definition on variables and the relevant preceding studies, a structured study model may be established so that the value orientation may let the production intention appear differently in accordance with the degree of recognizing shared value and that of recognizing public certification.

3. Research Methodology

Based on the previous studies of Eco-friendly product (e.g., Choi et al., 2014; Kim et al., 2014; Kim et al., 2013; Kim et al., 2013; Yang et al., 2013; Yang & Han, 2014; Yang et al., 2014) we established structured research model of this study suggested in <Figure 1>.



Note) PPC; Perceived Public Certification, CSV : Creating Social Value

Figure 1: Research Model

Hypothesis 1. Individualism inclination has positive influence upon perceived public certification.

Hypothesis 2. Collectivism inclination has positive influence upon perceived public certification.

Hypothesis 3. Individualism inclination has positive influence upon shared value.

Hypothesis 4. Collectivism inclination has positive influence upon shared value.

Hypothesis 5. Perceived public certification has positive influence upon Production intention.

Hypothesis 6. Shared value has positive influence upon Production intention.

Hypothesis 7. Perceived public certification will be mediated between individualism and production intention

Hypothesis 8. Perceived public certification will be mediated between collectivism and production intention

Hypothesis 9. Shared value will be mediated between individualism and production intention

Hypothesis 10. Shared value will be mediated between collectivism and production intention

This study carried out survey with producers of agricultural and livestock products in Incheon-si and Gyeonggi-do for two weeks from April 7, 2014 to April 19, 2014. As for the methods of survey, questionnaires were put in mail boxes by site visit, and were collected the next day. A total of 151 questionnaires were collected, and 149 effective answers, with two insincere answers excepted, were used in the analysis. In this study we performed frequency analysis, descriptive statistical analysis, correlation analysis, single regression analysis, multiple regression and 3-step mediated regression using SPSS 19.0 and AMOS 19.0.

Demographic characteristics of the participants were shown in table 1.

Table 1: Demographic Characteristics

Characteristics	Sub-dimension	Frequency	Ratio(%)
Gender	Male	113	75.8
	Female	36	24.2
Age	26~35	33	22.1
	36~45	37	24.8
	46~55	42	28.2
	56~65	25	16.8
	Over 65	12	8.1
Marriage status	Married	104	77.6
	Unmarried	30	22.4
Monthly income (million KRW)	less than 300	75	50.3
	300~400	40	26.8
	400~500	16	10.7
	500~600	8	5.5
	more than 600	10	6.7
Level of education	High school or less	59	39.9
	In college	18	12.2
	College graduation	67	45.3
	More than Graduate	4	2.7

Note) Marriage status 15 participants, Level of education 1 participant were missing.

The study investigated individuals' value inclination by 3 questions of individualism and 5 questions of collectivism by Likert 5-point scale based on McCarty & Shrum(2001), and did perceived public certification by 12 questions based on Burton et al.(1994), and did shared value by 9 questions based on Herscovitch & Meyer(2002), and did production intention by 3 questions based on Han(2011) by using Likert 7-point scale. All variables were converted into z-score to make correction of difference of the scales.

To verify internal consistency of test items, Cronbach's α was used to test reliability. Che(2002) argued that Cronbach's α coefficient of 0.6 or more was thought to have reliability. In this study, variables were found to be 0.724 ~ 0.950 and to be reliable. A confirmatory factor analysis was done to test validity of variables. Individualism had AVE of less than 0.5 to confirm validity by comparing coefficient of determination of R-squared, and other variables had AVE of more than 0.5 to have validity.

Table 2: Reliability and Validity

Variables	Sub-dimension	first items	Final items	Cronbach's α	Construct Reliability	AVE
Value	Individualism	3	3	.724	.738	.489
Inclination	Collectivism	5	5	.911	.924	.709
Perceived public certification		12	12	.950	.961	.677
Shared value		9	9	.934	.944	.718
Production intention		3	3	.898	.807	.583

A confirmatory factor analysis investigated direction and causal relation of the variables, and correlation analysis was done to confirm validity of the variables reported in Table 3.

Table 3: Results of Correlation analysis (n=149)

	1	2	3	4	5
1.Individualism	(.489)				
2.Collectivism	.565**	(.709)			
3.Perceived public certification	.343**	.410**	(.677)		
4.Shared value	.271**	.509**	.665**	(.718)	
5.Production intention	.213**	.359**	.673**	.711**	(.583)
Mean	3.27	3.78	3.82	3.49	4.88
Standard deviation	0.73	0.78	0.83	0.78	1.36

Note) ** p<.01, AVE marked in ().

Simple regression analysis was done with control of demographic variables to do direct effect test. Specifically, Individualism inclination had positive influence upon perceived public certification ($\beta=.319$, $p<.01$) and shared value ($\beta=.255$, $p<.01$). So, Hypothesis 1 and Hypothesis 2 were supported. Collectivism inclination had positive influence upon perceived public certification ($\beta=.419$, $p<.01$) and shared value ($\beta=.528$, $p<.01$), respectively. So, Hypothesis 3 and Hypothesis 4 were supported, too. Multiple regression analysis was done with control of same demographic variables to verify which factor had more significant influence upon perceived public certification between two factors, only Collectivism inclination ($\beta=.348$, $p<.01$) had significantly positive influence upon perceived public certification. Also, multiple regression analysis was done with control of same demographic variables to verify which factor had more significant influence upon shared value between two factors, only Collectivism inclination ($\beta=.564$, $p<.01$) had significantly positive influence upon shared value. On the other hand, perceived public certification ($\beta=.640$, $p<.01$) and shared value ($\beta=.673$, $p<.01$) had positive influence upon production intention. So, Hypothesis 5 and Hypothesis 6 were adopted. Although we did not set hypothesis, the results of multiple regression analysis showed that perceived public certification ($\beta=.448$, $p<.01$) and shared value ($\beta=.344$, $p<.01$) in order had influence upon production intention, Finally, multiple regression analysis was done with control of same demographic variables to verify which factor had more significant influence upon production intention, shared value ($\beta=.442$, $p<.01$) and perceived public certification ($\beta=.357$, $p<.05$) in order had positive influence upon production intention. But, Value inclination was not significant. 3-step mediated regression analysis was done to test mediating effects of factors of consumption inclination between value inclination and environmental friendly product purchase intention (Baron & Kenny, 1986) was shown in Table 4.

Table 4: Results of Mediation Effect

Independent Variables (IV)	Mediation Variables(MV)	Step	Results	R ²	F
Individualism	PPC	1(β_1)	.319**	.501	23.549**
		2(β_2)	.183*		
		3(β_3,IV)	-.023		
		3(β_3,MV)	.648**		
	CSV	1(β_1)	.255**	.545	28.185**
		2(β_2)	.183*		
		3(β_3,IV)	.013		
		3(β_3,MV)	.670**		

Collectivism	PPC	1(β_1)	.419**	.513	24.771**
		2(β_2)	.374**		
		3(β_3, IV)	.129		
		3(β_3, MV)	.585**		
	CSV	1(β_1)	.528**	.546	28.219**
		2(β_2)	.374**		
		3(β_3, IV)	.026		
		3(β_3, MV)	.659**		

Note) * $p < .05$, ** $p < .01$

The findings were as follows. Perceived public certification and shared value are full mediated between value inclination and production intention, respectively. So, Hypothesis 7, 8, 9 and 10 were adopted.

3. Conclusion and Recommendations

As a result of hypothesis verification, the following several implications could be obtained. First, as an theoretical implication, the study on cause-and-effect relationship aimed at producers in this study may be quoted, which has been carried out about whatever factors that would affect the intention to produce environmentally friendly products. This can be said to have been an attempt to establish a more effective and specific strategy through identifying the characteristics of producers that must be considered first of all in the process of establishing policies. Second, it is pointed out that by bringing the producers' situation into relief together with environmental protection, a clue on how to make a contribution to the development of the sixth industry, which has recently been materialized and put into practice, could be provided. As a practical implication, First, with the notion that the value orientation of producers exert a positive influence on the perception on public certification and shared value, it has been identified that producers with collectivism orientation would exert a positive influence on production intention and perception on public certification, Such a result means that there's a need for emphasizing that the production of environmentally friendly products will eventually be a necessity not only for realizing profits on a personal basis but also for that in an across-the-country basis. Therefore, it is implicated that the possibility for making a success in establishing and managing policies will be high only when education and campaign in the direction that enables the accommodation of a collective body's value can be achieved in advance. Second, the fact that the shared value and the perception on public certification exert a more influence on the production of environmentally friendly products consequently means that there's a need to maximize the sense of social duty about the production of environmentally friendly products. Viewing from such a standpoint, the fact is that a number of producers are not recognizing the recent strategies for developing the sixth industry appropriately, which has been focused on agriculture,

and such a fact is presenting a need for their self-examination. Therefore, it is necessary to make efforts to present a vision to producers with regard to the reasons for participating in producing environmentally friendly products and the results thereof. Regarding such an assertion, it has been confirmed that the results from the mediation effect analysis are supporting it as well. However, there exists several limitations such as in generalizing the study results because this study has been carried out with the study subjects limited only to those producers of agricultural and livestock products within the Gyeonggi-Incheon region.

References

- Baron, R. M. & Kenny, D. A. (1986). The Moderator-mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Che, Seo-Il (2002). *Social Research Method and Analysis*. Seoul: Hakhyunsa.
- Cho, Yoon-Hyung, Cho, Yung-Ho, & Yang, Hoe-Chang (2005). A Study on the Relationship Between Value Orientation and Brain Use Dominance. *Korean Journal of Management*, 13(3), 73-98.
- Choi, Beet-Na., Lee-Hyen-Ho., & Yang, Hoe-Chang (2014). Impacts of Value Inclination and Self-Expressive Consuming Propensity upon Eco-Friendly Product Purchasing Intention. *East Asian Journal of Business Management*. 4(4), 39-49.
- Engel, J. F., Blackwell, R. D., & Kollat, D. T. (1983). *Consumer Behavior* (4th ed.). New York: Molt, Rinehart and Winston, 188.
- Go, Jung-Won, Lee, Seong-Lim & Kim, Min-Joung (2010). Consumers' Consciousness of the LOHAS Consumption and the Consumption of the LOHAS Products, *Journal of Consumer Studies*, 21(4), 89-112.
- Herscovitch, L., & Meyer, J. P. (2002). Commitment to Organizational Change: Extension of a Three-Component Model. *Journal of applied psychology*, 87(3), 474-487.
- Kim, Mi-Song., Choi, Hyung-Kyo., & Kim, Dong-Hwan (2013). Ana Analysis of the Effects of Consumer Characteristics and Consumer Trust on Purchase Intention of Environment-friendly Agricultural Products. *Journal of Distribution Science*, 11(1), 45-53.
- Kim, Mi-Song., Kim, Dong-Hwan., Lee, Gi-Hwang., & Youn, Myoung-Kil (2013). Effects of Selection Criteria for Eco-Friendly Agricultural Products on Purchase Intention. *Journal of Distribution Science*, 11(12), 71-81.
- McCarty, J. A., & Shrum, L. J. (2001). The Influence of Individualism, Collectivism, and Locus of Control on Environmental Beliefs and Behavior. *Journal of Public Policy & Marketing*, 20(1), 93-104.
- Park, Jin-Kyoung (2014). Study on Livestock Products HACCP System Awareness of the Housewives and Its Application, Seoul: Korea, Thesis For Doctorate in Sangmyung University.

- Park, Sun-Young, Lee, Sun-Jae (1999). A Study on Orientations, Clothing Behavior, and Clothing Purchasing Motives of High School Students: Focus on Individualism/Collectivism. *Journal of the Korean Society of Costume*, 47, 47-60.
- Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard business Review*, 89(1/2), 62-77.
- Rohner, R. P. (1984). Toward a Conception of Culture for Cross Cultural Psychology. *Journal of Cross Cultural Psychology*, 15, 111-138.
- Triandis, H. C. (1989). The Self and Social Behavior in Differing Cultural Contexts. *Psychological review*, 96(3), 506-520.
- Yoon, Hyo-Sil & Yoon, Hey-Hyun (2013). A Study on the Effect of Personal Consumption Values on Purchase Intention of Environment Friendly Agricultural Products: The Moderating Effect of Environmental Conscious Behavior. *Korea Academic Society of Hotel Administration(KJHA)*, 22(1), 253-267.