

Congruence Effect of Brand and Eco-Certification on Consumers' Purchasing Behavior of Green Products: The Case of Vietnam

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ABSTRACT

For recent years, the environmental pollution and Climate change have led consumers toward green product consumption. To recognize the green product, consumers need quality cues as eco-certification (Dekhili & Achabou, 2015). However, despite a growing number of eco-certifications, its role in the consumers' purchasing behaviors for green products is still under controversy, and many consumers are still count on extra cues of brand and country of origin to make their decisions (Bloom & Reve, 1990; Dekhili & Achabou, 2015). Thus, this study explores how brand origin (the brand's country of origin) and eco-certifications origin would interact to affect the consumers' purchasing behavior of green products.

Since the extant literature on responsible consumption is mainly prevalent in developed countries, we conducted the study in an emerging context. We chose Vietnam as it is a populous developing country with increasing concerns of green products (Phan, 2017). A 2 (brand: national vs. international) x 2 (eco-certification: national vs. international) between subject experimental design was conducted with 640 Vietnamese consumers in April - May 2018. The results obtained indicate the preference of consumers for national products, while eco-certification origin does not yield a significant impact on consumers' purchase intent. However, a moderate incongruence between brand origin and eco-certification origin would enhance the consumers' purchase intent. Finally, moderation effects of product involvement, familiarity with brand and product, and demographic characteristics of gender, age and education exist. From the findings, the authors propose implications for managers and researchers.

Keywords: Congruence effect, brand origin, eco-certification origin, purchase intent, green products.

1. INTRODUCTION

With the increasing consequences of climate change, consumers' behavior worldwide has changed with rising demand for eco-certificated products. Eco-certification is a popular certification that consumers can use to infer the green impacts (ISO, 2012). Consumers often exhibit greater preference for eco-certificated products than non-certified options (Aguilar & Cai, 2010; Atkinson & Rosenthal, 2014). Nevertheless, several consumers are still distrust in these eco-certifications and turn to other extrinsic cues for the quality as brand and country of origin (Bloom & Reve, 1990; Cason & Gangadharan, 2002; Daniela et al., 2012; Dekhili & Achabou, 2015). Brand is considered as a quality contract between the enterprise and consumers for the offering goods and services (Kapferer, 2008; Staveley, 1987). Thus, well-known brands may enhance consumers' trust and impact positively on their choice (Achabou & Dekhili, 2013; Batra et al., 2000). Country of origin impacts on green consumers' purchase behaviors too (Aguilar & Cai, 2010; Dekhili & Achabou, 2015). However, information regarding to country of origin is disclosed separately or embedded in other extrinsic cues (e.g. brand origin) might not impact on consumers' purchase behaviors equally, with the latter is still underexplored (Samiee et al., 2005). This study further investigates the latter issue by exploring how country of origin embedded in brand and eco-certification (in terms of brand origin and eco-certification origin) affects consumers' purchase intent for green products.

DeSarbo and Harshman (1985) exhibited that if a person has positive (or negative) attitude toward several evaluations (e.g. a source, a brand), then a state of "congruity" existed. There are calls for further empirical examinations in both congruence and moderate incongruence effects in the congruity literature (Blasche & Ketelaar, 2015; Dahlén et al., 2008; Lee & Thorson, 2008; Till & Busler, 2000). Evidences have been found that if cues involved in an advertisement have congruence, the effectiveness of the communication will be enhanced (Blasche & Ketelaar, 2015; DeSarbo & Harshman, 1985). In the other hand, a moderate incongruence might even more effective than extreme congruity or incongruity (Dahlén et al., 2008; Mandler, 1981). Certainly the proliferation of researches into the effects of congruence and moderate incongruence supports the analysis that this issue should be investigated more. In the responsible consumption literature, while there has been a considerable amount of research into the impacts of eco-certification on consumers' behavior, relatively little research has been done in the area of eco-certification origin and brand origin congruence or incongruence impacts. Hence, we propose in this research to further explore the congruity effects of brand origin and eco-certification origin on consumers' purchase intent toward green products, and identify the best efficient eco-certification origin and brand origin per se.

Since most of prior studies in the literature on responsible consumption are prevalent in developed countries (D'Souza et al., 2006; Royne et al., 2011), we propose to extend the study to the context of a developing country. We choose Vietnam because it is a populous developing country with impressive economic growth rate (over 6% annually) (World Bank, 2017). In addition, Vietnam is located in Asia – the region that green product's market share is growing at a fast pace (Willer & Lernoud, 2016). Vietnamese consumers' concerns of environment is also increasing after series of environmental incidents, and major shifts in the consumption lifestyle toward green products have occurred (Phan, 2017).

From such motivations, we defined the following research question:

How do brand origin and eco-certification origin would interact and impact on the Vietnamese consumers' purchase intent for green products?

To address this question, we begin our paper with an overview of prior studies on brand origin, eco-certification origin, the congruence and moderate incongruence effects. Next, we explain the methodology employed and discuss the study's main results. Finally, we discuss the findings, limitations, and implications for managers and future research.

2. LITERATURE REVIEW

2.1 Brand origin and consumers' purchase intent of green products

A brand could be considered as a contract of quality and value between the enterprise and consumers for the offering goods and services (Kapferer, 2008; Staveley, 1987). Consequently, all aspects of a brand, including brand origin have received much attention from researchers (Batra et al., 2000; Bilkey & Nes, 1982; Kotler, 2000; Samiee et al., 2005; Schuiling & Kapferer, 2004). "Brand origin can be thought of as the country a brand is associated with or the headquarters of where the brand's owner is perceived to be located" (Samiee et al., 2005, p. 382). Regarding brand origin, Schuiling and Kapferer (2004) surveyed respondents in UK, Germany, France, Italy and found that local brand usually receives high judgments from consumers for most of the product's attributes than global brand. In contrast, the trend of favoring global brands is more evident in developing countries, especially when consumers have high admiration of the lifestyle in developed countries (Batra et al., 2000; Bilkey & Nes, 1982; Ochkovskaya, 2015). Due to the fact that Vietnam is a developing country, we postulate the following hypothesis:

H1: Consumers express higher purchase intent for a green product mentioning an international brand vs. national one

2.2 Eco-certification origin and consumers' purchase intent of green products

Consumer's demand for green products endorsed by eco-labels is expanding (Blend & Van Ravenswaay, 1999; ISO, 2012). With the rising of eco-labels, the International Organization for Standardization has classified eco-labeling schemes into three types (ISO, 2012):

- Type I environmental labeling: this is the "classic" eco-labeling schemes, which award a mark or a logo based on the fulfillment of a set of criteria. .
- Type II self-declared environmental claims: these are claims made by manufacturers and businesses.
- Type III environmental declarations: this type consists a formalized set of environmental data describing the environmental aspects of a product.

Among these, consumers are incline to have higher trust for eco-labels Type I with the verification process from third organization (Aguilar & Cai, 2010; Atkinson & Rosenthal, 2014). This article focuses on Type I eco-labels only, and we called them eco-certifications since the adoption of these eco-labels require manufacturers to get through stringent criteria to receive the certification (Case, 2004).

Consumers cannot verify green attributes directly, they need cues as eco-certification to authenticate claims (Atkinson & Rosenthal, 2014; Blend & Van Ravenswaay, 1999). To trust an eco-certification, consumers will concern of who certify it (Atkinson & Rosenthal, 2014). An eco-certification issued by organizations with stringent standards is more likely to be trusted by consumers (Cason & Gangadharan, 2002). Between international and national eco-certifications, the international one might have advantages in gaining consumers' confidence due to (1) more stringent criteria in the verification process, and (2) less bias toward domestic industry standards (Kahlenborn & Dominé, 2001). Thus, we posit the following hypothesis:

H2: Consumers express higher purchase intent for green products certified by international eco-certification vs. national one.

2.3 The congruence and moderate incongruence effects

Studies suggest that consumers' purchase behaviors are sometimes influenced by the congruence or incongruence in product's extrinsic cues (Blasche & Ketelaar, 2015; Lee & Thorson, 2008; Till & Busler, 2000). In marketing, the construct of congruence describes the deliberate fit, similarity, match-up, suitable or isomorphism (Blasche & Ketelaar, 2015; Eckstein, 1997). If attributes explicating on the product (or advertisement) as brand and endorsers have a congruence, the advertising effectiveness and persuasiveness would increase,

and generate better consumer purchase behaviors (Blasche & Ketelaar, 2015; Lee & Thorson, 2008; Till & Busler, 2000). This is due to the transmission of positive valuations from one object onto another based on shared associations (Spry et al., 2011). In contrast, incongruence is referred to some forms of mismatch (Mandler, 1981). Studies have demonstrated that a moderate incongruence might bring more effects on consumers' purchase behaviors than the extreme congruence or incongruence, which is named as "moderate incongruity effect" (Dahlén et al., 2008; Mandler, 1981).

Brand and eco-certification are extrinsic cues that help consumers to infer products' quality, and both have positive effects on consumers purchase behavior (Atkinson & Rosenthal, 2014). Such positive impacts may create the congruence effect between the cues (DeSarbo & Harshman, 1985). A mismatch in the origins of brand and eco-certification would create a moderate incongruence. Under the moderate incongruity effect (Mandler, 1981), we expect this mismatch would heighten consumers' purchase intent.

H3: The congruence effect between brand and eco-certification is higher when the origins of brand and eco-certification have incongruity.

2.4 Moderators affecting the impacts of brand origin and eco-certification origin

2.4.1 Consumers' ethnocentrism

Studies reveal that consumers' ethnocentrism is an important moderator when studying the effects of brand origin (Batra et al., 2000; Samiee et al., 2005). Consumers' ethnocentrism are consumers' beliefs about "the appropriateness, indeed morality, of purchasing foreign-made products" (Shimp & Sharma, 1987, p. 280). By studying consumers' behaviors in developed countries, Heslop and Papadopoulos (1993) showed that countries with lower level of industrialization tend to have lower preference for domestic products. For developing countries, Batra et al. (2000) did not find any significant moderating effect of consumers' ethnocentrism on effects of brand origin. Consistently, an insignificant impact of consumers' ethnocentrism on actual purchasing of domestic or imported brands in Chinese consumers was found (He & Wang, 2015). As Vietnam is a developing country with low industrialization level, we expect that consumers' ethnocentrism does not moderate the effects of brand origin and eco-certification origin as in the following hypothesis:

H4: Consumers' ethnocentrism does not moderate the effects of brand origin and eco-certification origin on their purchase intent for green products

2.4.2 Product involvement

Product involvement illustrates how consumers classify products into groups of involvement based on the inherent needs, values, and interests (Zaichkowsky, 1985). Prior studies have addressed product involvement as an important moderator when referring the impacts of eco-certification or country of origin on consumer's purchase behavior (Atkinson & Rosenthal, 2014; Kotler, 2000). More precisely, the appearance of an eco-certification only generate positive reactions in consumers with low-involvement toward products, whereas this effect was less relevant in the case of high-involvement ones (Atkinson & Rosenthal, 2014). Similarly, the impact of country of origin varies with products' categories (Kotler, 2000). Thus, we suggest the following hypothesis:

H5: Product involvement moderates the effects of brand origin and eco-certification origin on the consumers purchase intent for green products

2.4.3 Familiarity with brand, eco-certification and product

Studies suggest that levels of familiarity with brand, certification, or the product itself may affect the consumers' purchase behavior (Achabou & Dekhili, 2013; Batra et al., 2000; Rashid, 2009). Brand reputation is the third biggest factor affecting the consumer's preference, after quality and price (Achabou & Dekhili, 2013). Whereas a high awareness of an eco-certification would strengthen the relationship between the precedents and green

product purchase intent (Rashid, 2009). Lastly, if consumers are less familiar with the product, they are more inclined to use the perceived local or nonlocal origin as a cue in their behavior (Batra et al., 2000). Thus, we postulate the following hypotheses:

Brand familiarity (H6), eco-certification familiarity (H7), and product familiarity (H8) moderate the effects of brand origin and eco-certification origin on the consumers' purchase intent for green products

2.4.4 Eco-certification credibility

To verify credence attributes of a green product, consumers tend to trust or distrust a claim, or a certification embedded in the product's label (Bottega & De Freitas, 2009). In this behavior, "trust acts as a lubricant and simplifying strategy for consumers" (Atkinson & Rosenthal, 2014, p. 34). If consumers do not trust the information provided, eco-certification might not have impacts on consumers' green purchase behavior (Joshi & Rahman, 2015). Hence, the effects of eco-certification, and consequently the congruence effect between brand origin and eco-certification origin may not equal upon its credibility levels. This moderation effect is also supported by Tung et al. (2012). Consequently, we posit the following hypothesis:

H9: Eco-certification credibility moderates the effects of brand origin and eco-certification origin on the consumers' purchase intent for green products

2.4.5 Environmental concerns

Consumers' preference for local over imported products has also been found to be partly rooted in environmental concerns (Dentoni et al., 2009; Steenkamp & de Jong, 2010). This might be because imported products usually have high food miles, which may dampen the environmental pollution (MacGregor & Vorley, 2006). However, in the relationship between environmental concerns and the endorser-brand congruence, Blasche and Ketelaar (2015) recently have found that environmental concern does not moderate the endorser-brand congruence effect on advertisement attitude, brand attitude, and even purchase intention. Thus, we propose the following hypothesis:

H10: Consumers' environmental concern does not moderate the effects of brand origin and eco-certification origin on the consumers' purchase intent for green products

2.4.6 Demographic variables

In marketing, several studies have confirmed the effects of demographic variables on consumers' behavior (Aguilar & Cai, 2010; Brécard et al., 2009; Daniela et al., 2012; Tung et al., 2012). Consumers tend to pay a premium and have higher purchase intention for green products if they are female, high education, high occupation prestige, old age, or have children (Daniela et al., 2012; Tung et al., 2012). Brécard et al. (2009) also found that typical green consumers are young women and well educated. Drawn from the literature, we expect gender, age, education, income and child presence to moderate the effects on consumers' purchase intent with the following hypotheses:

Gender (H11), age (H12), education (H13), income (H14) and child presence (H15) moderate the effects of brand origin and eco-certification origin on consumers' purchase intent for green products

Underpinned by prior studies, we proposed the conceptual framework in Figure 1.

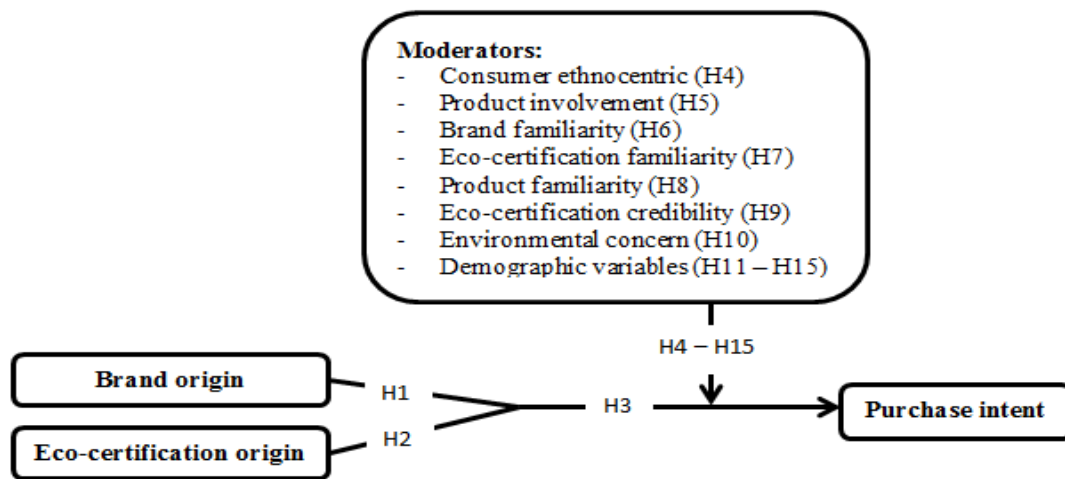


Figure 1: Conceptual framework

3. METHOD

To explore how brand origin and eco-certification origin might enhance the consumers' purchase intent of green products, a 2 (brand: national vs. international) x 2 (eco-certification: national vs. international) between subject experimental design was conducted with two-way and three-way ANOVA analysis.

3.1 Manipulation

The experiment included two main factors: brand origin and eco-certification origin, each with two levels (national vs. international), for a total of four conditions, repeated in two types of product involvement (high vs. low). The scenarios in the experiment were identical except for the manipulations and product involvement (Appendix 1). Consumers were presented the scenario before answering the questionnaire.

Product involvement. Two products with different levels of involvement were defined by 53 students from Foreign Trade University (HCMC campus), and HCMC University of Technology and Education. Student sample in pre-test can be accepted since they are catalysts for change and knowledgeable about green alternatives (Atkinson & Rosenthal, 2014; Kamins & Marks, 1991). They classified the existing five non-green products (paper, detergent, light bulb, ink, battery) and two organic products (milk, cereal) that are certifying by both national and international third party eco-certifications (Vietnam Green Label, PGS Hữu cơ Organic Certificate, EU certifications). Results revealed that milk was significantly different from light bulb in terms of product involvement: milk as high-involvement product, and light bulb as low-involvement one. In Vietnam, the consumption level for milk is quite low (about 17 liters/person/year) comparing to other countries in the region (Thailand: 35 liters/person/year, Singapore: 45 liters/person/year) (Forbes Vietnam, 2018). It is due to the habit of using less milk in the Vietnamese cuisine, as well as milk is considered as children's product (Le et al., 2016). Thus, when purchasing milk, Vietnamese consumers are somehow quite careful. By contrast, light bulb is used every day, and rarely damaged. Consumers are less likely to spend much time for selecting it. Milk and light bulb represent for two schools of green products too: organic food and non-food green products, which create several differences in consumer's behaviors (Dekhili et al., 2014). These make the consideration of milk and light bulb would yield more implications for the stakeholders.

Eco-certification origin. To select eco-certifications for the manipulation, we have considered the ones that meet the criteria of (1) issued by third party organization, (2) appeared in Vietnam for years to increase the familiarity. All the four eco-certifications meet the criteria: PGS Hữu cơ Organic Certificate was released in 2008, Vietnam Green Label was introduced in 2009 (IFOAM, 2013; VEA, 2011) and EU certifications were well-known in the

world. We manipulated eco-certification origin by varying the eco-certification and having a sentence stressing on its origin (Appendix 1).

Brand origin. We manipulated brand origin by varying the popular brands with different origins. For milk, we selected two famous brands representing for domestic milk (Vinamilk) and international milk (HIPP – Germany) for the following reasons:

- They are currently sold in supermarkets throughout Vietnam,
- These brands are manufacturing and trading organic products with eco-certification,
- The varying eco-certifications from Vietnam and EU is reasonable (HIPP is from Germany, and Vinamilk is a brand that strong enough to adopt EU certifications).

Similarly, for the light bulb, we selected Điện Quang (for Vietnamese light bulb) and Phillip (for international light bulb, originated from the Netherlands) to meet such criteria.

3.2 Measurement

Product involvement. To measure the product involvement in the pre-test, five items were adapted from Zaichkowsky (1985). All are measured by 7-point Likert scale anchored by 1 (strongly disagree) to 7 (strongly agree).

Purchase intent. Purchase intent was measured via a single 7-point Likert scale item (Dekhili & Achabou, 2015). Single item measuring purchase intent is also found in Atkinson and Rosenthal (2014). By asking a question of “How likely are you to buy this product within the next month?”, consumers will range their purchase intent from 1 = definitely will not buy to 7 = definitely will buy.

Moderators. Items measuring the eco-certification credibility, consumers’ ethnocentrism, and environmental concerns were measured by 7-point Likert scales anchored by 1 (strongly disagree) to 7 (strongly agree). *Eco-certification credibility* were measured by six items from Moussa and Touzani (2008). *Consumer ethnocentrism* was defined by 5 items from CETSCALE of Shimp and Sharma (1987). For *environmental concern*, we reused 6 items from Haws et al. (2014). For the *familiarity of brand, eco-certification and product*, we used an item of “What is your familiarity with this [brand, eco-certification, product]” ranging from 1 = not at all familiar to 7 = very familiar. All moderators were classified into two groups (high vs. low) under the median split.

3.3 Sample

Consumers were interviewed via the snowball sampling technique in April – May 2018 (Biernacki & Waldorf, 1981). From the initial 50 consumers invited by the authors, the final responses returned were 746. However, only 640 responses were brought into the analysis due to missing data, unengaged and outlier responses. Consumers were sent a link to access the online questionnaire, in which they are randomly assigned into one of four scenarios in each type of products with the help of Survey Monkey software. The sample average age was 32, 59.5% were female, and most of them are low and middle income household (Appendix 2).

4. FINDINGS

To assure the homogeneity of variance among groups, Levene’s test was conducted, and an insignificant result ($F(3,636) = .558, p > .1$) confirmed the error variance of the dependent variable was equal across groups, which enabled us to conduct further analyses (Field, 2009).

4.1 Main analysis: Effects of brand origin and eco-certification origin

Hypotheses H1 held that international brand would yield a more positive purchase intent. However, the result was contradicted to the expectation: consumers exposed to national brands had a significantly more favorable purchase intent ($F(1,636) = 8.748, p < .01, M = 5.091$) than consumers exposed to international ones ($M = 4.798$) - Table 1, 2. This partially supports the hypothesis H1, and infers that the brand origin can be used to predict the consumers’ purchase intent, yet in a surprising effect.

In hypothesis H2, we expected eco-certification origin to impact on the consumers' purchase intent, in which the international origin would heighten the impact. However, the result did not yield a significant impact, and rejected H2 (Table 1).

For hypothesis H3, the interaction between brand origin and eco-certification origin has significant effects on purchase intent ($F(1,636) = 4.373, p < .05$) – Table 1. Consumers were more incline to purchase domestic green products endorsed by international eco-certification ($M = 5.233, p < .05$) than by national one ($M = 4.950, p < .05$) – Table 2. This supports H3 as a moderate incongruence in brand origin and eco-certification origin yield higher purchase intent than an extreme congruence. Nevertheless, this moderate incongruity effect did not exist in the case of international brand, thus partially confirmed H3 only (Table 2).

Table 1: The effects of brand origin and eco-certificate origin on green product purchase intent

Variables	Purchase intent	Results
Constant	9914.961***	
Brand origin	8.748***	H1 : partially supported
Eco-certification origin	.582	H2: rejected
Brand origin*eco-certification origin	4.373**	H3 :partially supported
R ²	.021	
F (Levene's test)	.558	

*N = 640, values are F value, **p < .05, ***p < .01*

Table 2: Mean values for Brand on green product purchase intent

Variables	Levels of Brand Origin	Levels of Eco-certification origin	N	Purchase intent	SD	Results
Brand origin	National		322	5.091***	1.229	H1: partially supported
	International		318	4.798***	1.288	
Brand origin x Eco-certification origin	National	National	159	4.950**	1.216	H3: partially supported
		International	163	5.233**	1.230	
	International	National	154	4.864	1.294	
		International	164	4.732	1.283	

***p < .05, ***p < .01*

4.2 Moderation analysis: brand origin and eco-certification origin effects under values of moderators

Drawing from the literature, moderators of consumers' ethnocentrism, product involvement, eco-certification credibility, environmental concern, and demographic characteristics are considered. All moderators measured by more than one item have good reliability and validity (Cronbach's alpha > .6, one factor extracted only) (Nunnally & Bernstein, 1994) – Table 3.

In Table 4, only regression models for product involvement, brand familiarity, product familiarity, gender, age, and education were significant. Yet they mainly magnified the effects of brand origin, except brand familiarity did also magnify the congruence effect. For consumers' ethnocentrism and environmental concerns, consistent with prior studies in developing countries, there were no significant moderation impacts. Thus, the results supported hypotheses of H4 – H6, H8, H10 - H13 and rejected H7, H9, H14 and H15.

Table 3: Construct reliability and validity

Variables	Mean	SD	Cronbach's alpha	KMO	Bartlett's Test of Sphericity (Sig.)	Factor extracted
Eco-certification credibility	4.96	1.217	.918	.902	.000	1
Environmental concern	5.27	1.121	.893	.885	.000	1
Consumer ethnocentrism	3.9	1.412	.859	.774	.000	1

Items were measured with 7-point Likert scale

Table 4: Conditional effects of X_i on purchase intent at values of moderator M

Moderator M	Mean	Purchase intent			Results
		$X_1 * M$	$X_2 * M$	$X_1 * X_2 * M$	
Consumer ethnocentrism	3.9	.240	.089	.946	H4: supported
Product involvement		37.639***	2.67	1.281	H5: supported
Brand familiarity	4.7	9.740***	.001	3.534*	H6: supported
Eco-certification familiarity	2.76	.215	1.571	.191	H7: rejected
Product familiarity	4.51	5.504**	.698	.689	H8: supported
Eco-certification credibility	4.96	.234	.122	.014	H9: rejected
Environmental concern	5.27	.000	.005	.979	H10: supported
Gender		4.882**	.139	.048	H11: supported
Age	32.14	3.492*	1.232	.960	H12: supported
Education	Some college	4.841**	.125	1.057	H13: supported
Income	Lower med. income	1.281	.202	.018	H14: rejected
Child presence		.078	.046	.634	H15: rejected

Values are F values, * $p < .1$, ** $p < .05$, *** $p < .01$, X_1 : brand origin, X_2 : eco-certification origin

Three-way ANOVA was performed to better understand the moderating effects (Table 5). Vietnamese consumers were inclined to have higher purchase intent for national brand if the green product has high consumer's involvement ($M = 5.245$, $p < .01$), low brand familiarity ($M = 4.781$, $p < .01$), low product familiarity ($M = 4.828$, $p < .01$), or if consumers are female ($M = 5.116$, $p < .01$), old ($M = 5.438$, $p < .01$), high education ($M = 5.308$, $p < .01$). Nevertheless, for low product involvement, or high brand familiarity, consumers prefer international brand instead.

For the congruence effect between brand origin and eco-certification origin, low brand familiarity consumers tended to have higher purchase intent for national brand and endorsed by international eco-certification ($M = 5.172$, $p < .01$) than by national one ($M = 4.491$, $p < .01$) – Table 6. Yet brand familiarity did not significantly moderate the congruence effect in the case of international brand or high involvement product (Table 6).

Table 5: Mean values for main effects of X_i on purchase intent at values of moderators M

Moderator	Levels of M	Levels of Brand	N	Purchase intent	SD
Product involvement	Low	National	164	4.943**	1.158
		International	164	5.227**	1.142
	High	National	158	5.245***	1.285
		International	154	4.352***	1.279
Brand familiar	Low	National	136	4.781***	1.276
		International	207	4.414***	1.190
	High	National	186	5.290*	1.165
		International	111	5.533*	1.143
Product familiarity	Low	National	142	4.828***	1.299
		International	135	4.270***	1.247
	High	National	180	5.288	1.140
		International	183	5.185	1.176
Gender	Male	National	129	5.054	1.236
		International	130	5.023	1.220
	Female	National	193	5.116***	1.228
		International	188	4.638***	1.315
Age	Young	National	167	4.787	1.245
		International	166	4.661	1.234
	Old	National	155	5.438***	1.117
		International	152	4.946***	1.331
Education	Low	National	113	4.700	1.270
		International	101	4.695	1.279

	High	National	209	5.308***	1.150
		International	217	4.844***	1.292

* $p < .1$, ** $p < .05$, *** $p < .01$

Table 6: Mean values for congruence effects of brand origin and eco-certification origin on purchase intent at values of moderators

Moderator	Levels of Moderator	Levels of Brand	Levels of Eco-certification	N	Purchase intent	SD
Brand familiar	Low	National	National	53	4.491***	1.325
		National	International	83	5.072***	1.197
		International	National	93	4.495	1.203
		International	International	114	4.333	1.180
	High	National	National	106	5.179	1.094
		National	International	80	5.400	1.249
		International	National	61	5.426	1.231
		International	International	50	5.640	1.025

* $p < .1$, ** $p < .05$, *** $p < .01$

5. DISCUSSION

The aim of this study was to explore how brand origin and eco-certification origin can enhance the consumer's purchase intent for green products in the context of Vietnam, a developing country. After analyzing the wide sample throughout Vietnam, there are noteworthy findings need to be discussed.

First of all is the role of eco-certification origin in the consumers' purchase behavior. According to prior studies, consumers in developing countries are incline to favor green products certified by eco-certifications from developed countries (Cason & Gangadharan, 2002; Kahlenborn & Dominé, 2001). However, in our study, the distinction in the eco-certification origin does not have a meaningful impact. Similarly, both eco-certification credibility and familiarly did not moderate the relationships in the model as well. These results are surprising and it might be caused by the extreme low familiarity of the respondents with eco-certification (Mean = 2.76). When selecting eco-certifications for the manipulation, we have considered the ones that appeared in Vietnam for years to increase the familiarity. However, the result still reveals a popular unfamiliarity, which reflects a severe "lack of information" about the eco-certification in Vietnamese consumers. This might make consumers not distinguish differences among eco-certification origin to have significant impacts on the purchase intent. Because of the popular unfamiliarity, the median split for eco-certification familiarity to investigate moderation effects does not yield much sense too. However, there is still a good prospect for eco-certification development due to the fact that most consumers have good credibility in proposed eco-certifications (M = 4.96, SD = 1.217), which is very important for the future responsible consumption in Vietnam.

Despite eco-certification origin itself does not have a significant impact, when it combines with brand origin, the interaction between them does effect on the Vietnamese purchase intent. Consumers tend to favor a mix between domestic green brand and international eco-certifications, which confirms the "moderate incongruity effect" of Mandler (1981).

Contrary to the eco-certification origin, brand origin has clear impacts on the purchase intent of green products. This result is consistent with prior studies that brand is much more powerful than eco-certification in the consumers' purchase decisions (Ahmed et al., 2004). In general, Vietnamese consumers tend to favor domestic products over foreign ones, and it is unaffected by consumers' ethnocentrism, which is in line with consumers' behaviors in other populous developing countries as China and India (Batra et al., 2000; He & Wang, 2015). According to Heslop and Papadopoulos (1993); Shimp and Sharma (1987), consumer ethnocentrism is especially prominent among individuals whose livelihoods are threatened by

foreign competition. Vietnam, a populous developing country, however, is more likely to benefit from international trade. With increasing trade liberalization, thousands of jobs have been created for low-skilled labors and reduce the poverty (McCaig, 2011). This might explain an insignificant impact of consumer ethnocentrism. However, the priority for national brands is unexpected since developing countries are often to be seen as favoring foreign goods (Batra et al., 2000; Bilkey & Nes, 1982; Ochkovskaya, 2015). To explain, we rely on the impact of cultural identity on the choice of domestic over international brands. Cultural identity, which is very important in collective cultures, makes consumers love national brand due to their symbolic cultural meanings, but they do not necessary to reject imported brand (consumer ethnocentrism leads consumers to reject the imported brand and choose domestic brands regardless of the preference) (He & Wang, 2015). Vietnam is an Asian country sharing the characteristics of a strong collectivist society as China, Singapore, Korea and Japan (Phuong-Mai et al., 2005). Thus, the cultural identity may enhance the preference of domestic brands over foreign brands to some extent.

Interestingly, for different green product categories, the impact of brand origin on the Vietnamese consumers' purchase intent changes accordingly. Consumers tend to choose local brand for milk and foreign brand for light bulb. Organic milk is a high-involvement product because it is the children's product, and because of the habit of less milk cuisine. It is also an organic food, however. Previous studies indicated that consumers generally trust their national label for organic products (Janssen & Hamm, 2012; Sønderskov & Daugbjerg, 2011). Organic food is perishable, so spoilage would be a concern for foreign goods with high food miles. These might make national milk is more favorable in Vietnam. For light bulb—a low-involvement product in our study, we are careful to give a conclusion of a favorable for foreign brand over domestic one. Ahmed et al. (2004) argued that the effect of country of origin on the low-involvement product's purchase likelihood varies with the product being studied. Hence, more low-involvement products should be considered in the future.

Vietnamese consumers are more likely to select local green brands if they are old, less familiar with the brand or the product. Low brand and product familiarity are popular characteristics of rural consumers since they are quite far from social media and receive less extensive branding campaigns (Sun & Wu, 2004). They are also less sensitive to product-innovation as old consumers (Sun & Wu, 2004). These might explain why this segment of consumers are more incline to select local brand, at least for a better brand recall.

6. CONCLUSION

The particular focus of this study is to investigate the congruence effect of brand origin and eco-certification origin on the consumers' purchase intent for green products – an issue that is currently underexplored in the literature, especially in emerging countries context. Thus, the findings have contributed greatly to the extant responsible consumption literature. Due to the lack of information about eco-certifications, the main effect of eco-certification origin on Vietnamese consumers is not significant. However, brand origin strongly impacts consumers' purchase intent, with the main favor for national brands. For the congruence effect, the study somehow confirms a moderate incongruence in the origin of brand and eco-certification would enhance the purchase intent than an extreme congruence. Additionally, moderating effects of product involvement, brand and product familiarity, gender, age, and education also exist to compare with extant knowledge in responsible consumption.

Limitation and future research

Despite the findings obtained, the study has certain limitations. Firstly, the products representing for high and low-involvement levels that are certifying by third party national eco-certifications are quite restricted. We hope that with the expansion of Vietnam Green Label Program and PGS Hữu cơ Organic Certification, the range of green products involved

will increase in future experiments. Secondly, our study does not consider other Asian developing countries, in which their consumers' purchase behaviors might be very different due to the cultural diversity (Todaro & Smith, 2011).

From the limitations, we expect that future researches should consider more types of products to examine the congruence effects, especially the high and low involvement products. Besides, more cross-cultural studies with other Asian countries would be very fruitful. Lastly, future research should consider more for the role of country identity in the consumers' purchase behaviors.

Managerial implication

The study realizes that domestic brands have high impacts on consumers' purchase intent in the case of organic milk. Hence, Vietnamese brands in dairy industry should use their own brands to develop products, instead of using a brand that sound "international". For low-involvement products such as light bulbs, a joint venture with international enterprise may bring good effects on Vietnamese consumer purchase behavior.

The study also shows that Vietnamese consumers are unfamiliar with eco-certifications, but have good credibility in them. They also favor the mix between national brand and international eco-certification. Thus, Vietnamese enterprises should give high efforts to adopt international eco-certifications. Then, well-designed propaganda campaigns should be prepared to disseminate information relating to eco-certifications. Good consumers' credibility for third party eco-certifications would help to win the consumers' attention.

Finally, Vietnamese consumers that are female, above-average age, low familiarity with the product or brand will incline to purchase domestic products. These are the typical consumers in rural areas. Domestic enterprises should focus more in this niche market to develop the market share. For high-educated consumers, the preference for domestic brand may originate from the cultural identity, and good cultural story behind the brands might come to effects for this consumer segment.

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APPENDICES

APPENDIX 1: SCENARIOS IN THE EXPERIMENT



APPENDIX 2: RESPONDENTS' DEMOGRAPHIC DESCRIPTION

Attribute	Freq.	%	Attribute	Freq.	%	Attribute	Freq.	%
Gender			Occupation			Education		
Male	259	40.5	Self-employed	22	3.4	Secondary and below	16	2.5
Female	381	59.5	Manager	18	2.8	High school and relevance	198	30.9
Age			Clerk/officer	257	40.2	University and relevance	263	41.1
<20	50	7.8	Teacher	85	13.3	Post-graduated	163	25.5
20 – 29	242	37.8	Student	174	27.2	Household Income (monthly)		
30 – 39	242	37.8	Unskilled workers	42	6.6	Low (<\$460)	234	36.6
40 – 49	46	7.2	Retired	35	5.5	Lower Medium (\$460-\$920)	244	38.1
50 - 60	27	4.2	Others	7	1.1	Upper Medium (\$920 - \$1840)	105	16.4
> 60	33	5.2	Living place			High (>\$1840)	57	8.9
			North	53	8.3			
			Central	80	12.5			
			South	507	79.2			