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Instituto sobre Desarrollo Empresarial
Carmen Vidal Ballester
Universidad Carlos III de Madrid
C/ Madrid, 126
28903 Getafe Madrid (Spain)
FAX (34-91)6249607

UNDERSTANDING THE ROLE OF ATTITUDE COMPONENTS IN CO-BRANDING:

AN APPLICATION TO HIGH-TECH, LUXURY CO-BRANDED PRODUCTS

Keywords:

Co-branding; Attitude; Affect/cognition; High-tech; Luxury; Cross-cultural

Authors:

Nora Lado

Department of Business Administration, Carlos III University of Madrid
Calle Madrid 126, 28903 Getafe (Madrid), Spain
Tel: (34) 91 624 96 40 - Fax: (34) 91 624 96 07
E-mail: nora.lado@uc3m.es

Fabrizio Cesaroni

Department of Business Administration, Carlos III University of Madrid
Calle Madrid 126, 28903 Getafe (Madrid), Spain
Tel: (34) 91 624 93 22 - Fax: (34) 91 624 96 07
E-mail: fabrizio.cesaroni@uc3m.es

Alberto Maydeu-Olivares

Faculty of Psychology, University of Barcelona
P. Valle de Hebron 171, 08035 Barcelona, Spain
Tel: (34) 93 312 51 33 - Fax: (34) 93 402 13 62
E-mail: amaydeu@ub.edu

Han Chiang Ho

Department of Business Administration, Carlos III of Madrid
Calle Madrid 126, 28903 Getafe (Madrid), Spain
Tel: (34) 91 624 96 17 - Fax: (34) 91 624 96 07
E-mail: han-chiang.ho@uc3m.es

Abstract:

This study addresses co-branding between firms belonging to unrelated value chains –high-tech products and luxury brands (HLCPs) – to explore how consumers’ attitude drive the success of HLCPs. The study applies the tri-component attitude model (as opposed to attitude as a whole) that uses affect and cognition to predict purchase intention of co-branded products. Cultural differences (Spanish and Taiwanese) in consumers’ behavior are also assessed. Data collected in a survey show that Spanish and Taiwanese consumers adopt different purchasing processes: while Spanish consumers place more importance on product-related thoughts and follow a Feel-Learn-Do sequence in purchasing HLCPs, Taiwanese consumers follow a Learn-Feel-Do purchasing process.

1. Introduction

Marketers increasingly use co-branding strategies to reduce risks associated with entering new product categories, to gain more marketplace exposure, and to share high R&D and promotional costs with a partner. “Because brand names are valuable assets, they may be combined with other brand names to form a synergistic alliance in which the sum is greater than the parts” (Rao and Ruekert 1994, p. 87). Co-branding remains a prevailing strategy even when firms suffer from an economic crisis because it enhances product quality signals (Lee et al. 2006).

Antecedents of attitude towards co-branded products drive the success of co-branding alliances but most research considers attitude as a whole without accounting for attitude's components and their drivers (Simonin and Ruth 1998). It is possible to better comprehend consumer behavior and its implications for the launching strategies of co-branded products by analyzing the antecedents of different dimensions of attitude towards co-branded products. Decomposing attitude into its main components provides managers more clear information about customers' evaluation criteria for co-branded products. This study examines how the components of attitude interact with each other and explores the impact of different drivers of success in co-branding.

The primary objective of this research is to apply the tri-component attitude model in a co-branding context. The tri-component model involves affect and cognition as predictors of the conative dimension of attitude, that is, purchase intention. Second, this study sheds light on the effects of new forms of co-branding strategies on the dimensions of attitude. We focus on a specific category of co-branded products – resulting from the alliance of high-tech products with luxury brands – and explore how consumers' purchase intention is affected by the characteristics of such an alliance. Lastly, we assess the role of culture in the purchase process by comparing the behavior of consumers from two different countries – Spain and Taiwan.

Previous research has discussed co-branding strategies in arts (d'Astous et al. 2007),

sports (Motion et al. 2003), food (Kumar 2005; Ueltschy and Laroche 2004; Wright et al. 2005), industrial products (Bengtsson and Servais 2005; Erevelles et al. 2008) and airlines (Tsantoulis and Palmer 2008), along with co-branding in advertising (Grossman 1997; Monga and Lau-Gesk 2007) and franchising (Wright and Frazer 2007). Few works have investigated co-branding in the high-tech industry (Sengupta and Perry 1997; Stuart 1998) or explored the association of high-tech and luxury brands.

Our attention to high-tech, luxury co-branded products (HLCs) mainly responds to an opportunistic choice. They represent an interesting case of brands characterized by both functional attributes – in which cognitive aspects are predominant – and symbolic attributes – where the affective component is key. HLCs thus represent the perfect co-branding case for studying the interaction between these two components. Our attention is also driven by their increasing presence in the market. In a context of rapid technological progress, consumers find it difficult to assess and compare alternative offerings of high-tech products. A good way for consumers to choose products is selecting those with a trusted brand name (Aaker and Jacobson 2001). HLCs thus represent examples of products resulting from co-marketing alliances that seek to leverage the reputation of pre-existing brands in order to increase consumers' purchase intention (Venkatesh et al., 2000). It is easy to find many co-branded products created by both high-tech companies and luxury brands in the electronic product market. These co-branded products vary from simple electronic devices to more

sophisticated laptops. For instance, SanDisk releases the Ducati USB flash drive, LG releases the Prada cell phone, Motorola releases the Dolce&Gabbana (D&G) cell phone, Acer releases the Ferrari laptop, and so forth. All these examples share a common notable aspect: contrary to the typical cases of horizontal or vertical co-branded products (Helmig et al. 2008), HLCPs involve firms (and products/brands) located in two different value chains. It is not just a matter of reciprocal promotion strategy. Rather, such co-branding decisions represent more complex marketing strategies, whose (direct, indirect and spillover) effects have not been fully analyzed in the marketing literature. One challenge related to HLCPs is the effect that product fit may have on consumers' purchase intentions. Product fit is the relatedness of the product categories involved in the brand alliance (Simonin and Ruth 1998), where only a good product fit stimulates desirable attitude and associations (Helmig et al. 2007). However, how well luxury and electronic products fit with each other and its effect on intention to buy HLCPs still remains unanswered. This study attempts to provide an answer to these questions.

A further element of interest arises from the contrasting features of high-tech and luxury products. As Coco Chanel once said, "Luxury must be comfortable, otherwise it is not luxury". Luxury is exclusive (Phau and Prendergast 2000) and costly (Keller 2009), and entering a luxury market is a means of extending a brand (Danziger 2005). However, consumer's regard general electronic products as normal goods, not luxury goods. Thus, do

consumers modify their behavior when facing the purchase of a high-tech product presenting the additional attribute of luxury? The relevant question is not simply to assess whether the consumers' perception of HLCPs' positioning is different from that of a "normal" high-tech product with comparable technical features but to explore the particular characteristics of the complex steps that consumers take from problem recognition to purchase in the case of HLCPs.

Finally, we assess how cultural aspects affect consumers' purchasing process of HLCPs. Despite the fact that several identical products are sold in both Eastern and Western countries, consumers' perceptions differ in the two regions. Researchers indicate that culture significantly influences consumer behavior, in general (Lim and Ang 2008), and product fit perception in the context of brand extensions, in particular (Monga and John 2010). McCracken (1988) also points out that consumer behavior is a cultural phenomenon and that the relationship between culture and consumer behavior is strong. Adding a cultural dimension to our theoretical framework allows us to obtain a more complete picture of the co-branding phenomenon. Furthermore, we can also assess how culture influences the interplay between the affective and the cognitive components of consumer attitudes for a given product category.

The paper is organized as follows. Section 2 reviews the relevant literature and presents the main hypotheses. Section 3 discusses the empirical methodology and describes the data.

Section 4 presents the results. Section 5 concludes with a discussion of the findings and managerial implications of the study.

2. Literature review and hypotheses

Co-branding offers established brands an opportunity to increase sales of existing products and add immediate credibility to existing brands. It also involves some risks such as raising consumer mistrust, damaging the host brand's image (Chang 2009), diluting the host brand's equity (Ueltschy and Laroche 2004; Washburn et al. 2000) and increasing the host brand's financial burden (Blackett and Boad 1999). The alliance between two brands may confuse consumers about the image of both brands and consequently damage the brand equity of each brand (Park et al 1996). Understanding which conditions determine the success of co-branded products thus becomes crucial.

2.1 The tri-component model of attitude formation towards co-branded products

There are two main dimensions of attitude that influence consumer's behavior: affect and cognition (Dube et al. 2003; Laurent and Kapferer 1985; Putrevu and Lord 1994; Smith and Reynolds 2009). Their relevance and limits in shaping consumer's preferences have been recognized and discussed in the marketing literature since the beginning of the eighties (Zajonc and Markus, 1982; Tsal, 1985; Nakamoto, 1987). Subsequent studies have shown

that, even though both dimensions take part in consumers' assessment of intrinsic and extrinsic product characteristics (Compeau et al. 1998; Da Silva and Syed Alwi 2006), the affective dimension seems more relevant in the evaluation of hedonic products (Mano and Oliver 1993) and the cognitive dimension in the evaluation of utilitarian products (Hirschman 1980). Given that HLCPs present the features of the two types of products, both the cognitive and the affective responses should be involved in the purchase process.

Cognitive responses generate knowledge, awareness, thought, opinion, perception and beliefs in a consumer's mind. Cognitive evaluation also refers to brand image (Keller 2003; Malhotra 2005). The cognitive factor is important for prospective buying motivations and the consequence of cognitive processes contains a semantic meaning of product attributes (Caro and Garcia 2007). While most literature points out that both cognitive and affective attributes are important for consumer evaluation of brands, a few empirical studies show that the rational part of a brand is assessed prior to its emotional part (De Chernatony 2002). Therefore, cognitive brand attributes seem to have the most important influences on brand preferences (Da Silva and Syed Alwi 2006).

Brand image studies have also focused their attention on affective aspects of consumer behavior (Aaker 1982; Batra and Ray 1985; Burk and Edell 1989). The definition of "affect" includes mental status exclusively characterized by experienced feelings, emotions and moods such as happiness, anger, depression, gladness and fear. An affective response is based

on feelings towards a special stimulus related to cognitive effort (Anand et al. 1988; Westbrook 1987) and the result of an affective judgment is typically a crucial determinant for daily consumption experiences (Anand et al., 1988), which brings consumers to use it to form a priori consumption experience on which they base their future purchasing decisions (Cowley 2007).

Albeit previous research has suggested the dominance of one dimension of attitude over the other in contexts of purchase and consumption (Shiv and Fedorikhin 1999), the direction of causality between affect and cognition and the way in which they impact purchase behavior remains largely unexplored. Dube et al. (2003) have made an attempt to overcome such limitation by introducing a more complex hierarchical structure of consumer attitudes by which clusters of attributes formed on the basis of their nature (immediate vs. deliberative) are then nested within affective and cognitive bases. In this paper we propose an alternative direction and explore whether the cognitive and the affective components of consumer attitudes are activated simultaneously or rather sequentially in the process of attitude formation.

On the one hand, consumers' cognitive responses are prior to affective responses in the traditional concept (Anand et al. 1988) and typically impact the affective response to convey a belief (Bhat and Reddy 1998; Johnson and Grayson 2005), even though in consumers' mind affective responses might be more basic and come first to influence their cognitive responses

(Helgeson and Ursic 1994; Zajonc 1980). On the other hand, affect dominates over cognition when predicting conative attitude (Morris et al. 2002), thus it strongly influences a consumer's purchase of a product or service (Allen et al. 1992; Barsky and Nash 2002). Consequently, we derive the following hypotheses:

H1a1: In the purchase of HLCPs, affective responses positively affect consumers' purchasing intention.

H1a2: In the purchase of HLCPs, cognitive responses positively affect consumers' purchasing intention.

H1b: In the purchase of HLCPs, cognitive and affective responses of consumers' behavior affect each other.

Cognitive and affective aspects are also important in understanding what drives consumers' image of luxury products (Wiedmann et al. 2007). When consumers buy luxury products, the affective dimension is more pronounced than the cognitive dimension because luxury products provide prestige, conspicuousness, materialism, hedonism, self-identity, uniqueness, and quality to consumers. All of these values exclusively transcend the values

that cognitive aspects could provide (Wiedmann et al. 2007). In the case of HLCPs we can expect the affective response to play a mediator role between consumers' general (and pre-existing) attitude towards luxury goods and (subsequent) intention to buy the co-branded product. In contrast, the cognitive response should especially intervene in the relationship between consumers' general (and pre-existing) acceptance of high-tech products and (subsequent) HLCPs' intention to buy. Consumers' attitude – and, specifically, the cognitive response – thus mediates the relationship between acceptance of high-tech products and intention to buy HLCPs.

The Foote, Cone & Belding (FCB) framework (Vaughn 1980, 1986) provides useful suggestions in this context. The FCB grid compares consumers' cognitive (“thinking”) and affective (“feeling”) judgments of products with the degree of consumers' involvement (high/low) during the purchase process. “Thinking” products typically solve consumers' problems, while “feeling” products satisfy consumers' sensations (Athiyaman 2008). Consumers focus on the functions, price, and availability of high involvement “thinking” products and the purchase process follows a Learn-Feel-Do sequence. The purchase decision of high involvement “feeling” products is mainly influenced by holistic feelings and a Feel-Learn-Do sequence. Thus, cognitive and affective dimensions are expected to play different roles in the case of HLCPs, which include both “thinking” and “feeling” components. While the cognitive response mediates the relationship between acceptance of

high-tech products and purchase intentions, the affective response should only intervene in the relationship between consumers' attitude towards luxury goods and purchase intentions.

As a consequence, we add the following hypotheses:

H1c: In the purchase of HLCs, cognitive response mediates the relationship between consumers' acceptance of high-tech products and purchasing intention of the co-branded product.

H1d: In the purchase of HLCs, affective response mediates the relationship between consumers' pre-attitude towards luxury goods and purchasing intention of the co-branded product.

2.2 Direct and indirect effects of brand fit and product fit on HLCs' purchase intention

The likelihood of success of co-branded products increases with the degree of awareness, brand equity, familiarity and quality of the constituent brands (Blackett and Boad 1999; Desai and Keller 2000; Motion et al. 2003; Park et al. 1996; Rao et al. 1999; Tsantoulis and Palmer 2008; Ueltschy and Laroche 2004; Washburn et al. 2000; Yeung and Wyer 2005).

The existing relationship between constituent brands determines whether co-branded products will be successful. "Product fit" is the consumers' perception of the extent of

compatibility of two (or more) product categories, and “brand fit” is the degree of consistency of brand images of each partner (Simonin and Ruth 1998). A high degree of fit can induce a positive evaluation of the co-branded product (Aaker and Keller 1990; Bhat and Reddy 1998; Boush and Loken 1991), increasing the likelihood of success of a co-branded product (Helmig et al. 2007; Menon and Kahn 2003; Simonin and Ruth 1998). The likelihood of success also increases when the complementary degree of constituent brands is high (Lee et al. 2006; Monga and Lau-Gesk 2007; Park et al. 1996). On the other hand, if brand fit and product fit of two constituent brands are inconsistent, the co-branded product creates unpleasant beliefs and negative judgments in consumers.

In the case of HLCPs, where the constituent brands originate from very diverse product categories, the impact of brand and product fits on the likelihood of success of the resulting co-branded product is more complex. Brand fit and product fit affect consumers’ behavior in different ways, generating dissimilar cognitive, affective and behavioral responses. If the tri-component model of consumers’ attitude is considered, it is likely that HLCP’s purchase intention is affected by product fit and brand fit both directly and indirectly. Apart from the direct effect, the perceived fit between the constituent brands and product categories should impact consumers’ cognitive and affective evaluations of the co-branded product and, in turn, on HLPCs’ purchase intention. Thus, the cognitive and affective responses (partially) mediate the relationships between purchase intention and product fit and between purchase intention

and brand fit. Based on these considerations, we draw the following hypotheses:

H2a: The higher the product fit, the higher the consumers' intention to buy HLCPs.

H2b: The higher the brand fit, the higher the consumers' intention to buy HLCPs.

H2c: The higher the product fit, the stronger the consumers' affective response toward HLCPs.

H2d: The higher the product fit, the stronger the consumers' cognitive response toward HLCPs.

H2e: The higher the brand fit, the stronger the consumers' affective responses toward HLCPs.

H2f: The higher the brand fit, the stronger the consumers' cognitive responses toward HLCPs.

2.3 Acceptance of high-tech products as a basic determinant of HLCPs' purchase intention

Provided that HLCPs are based on a high-tech product with an additional luxury attribute, a basic element to consider is consumers' acceptance of high-tech products in general. With the development of scientific and technological progress, high-tech products have become more delicate and complex, integrating many advanced functions within one device. Because of a lot of techno-babble terminology created by high-tech companies and a lot of jargon from trained salespeople confusing consumers, the evaluation of product's attributes is not an easy task. Shopping for high-tech products involves a big challenge. The acceptance of high-tech products (i.e., the ability to appraise their characteristics) thus represents a key determinant of a consumer's purchase intention of HLCPs. Therefore, we hypothesize:

H3: The higher the degree of acceptance of high-tech products, the higher the consumers' intention to buy HLCPs.

2.4 The effect of pre-attitude towards luxury goods on HLCPs' purchase intention

Consumers usually buy luxury goods to advertise their wealth and communicate their higher social status by focusing on intangible attributes e.g. vanity or satisfaction. The main

intention of such a buying behavior is often to impress others with symbols of money or distinguish one's self from ordinary people to convey a higher social status (Mason 1981). Luxury goods thus represent the means by which consumers project an image of themselves to others.

Several motivations have been identified for the purchase of luxury goods: conformity, social recognition (Park et al. 2008), parental influence (Prendergast and Wong 2003), and social acceptance (Summers et al. 2006) are some of them. Luxury consumption has five effects: the *Veblen effect* (perceived conspicuous value), the *Snob effect* (perceived unique value), the *Bandwagon effect* (perceived social value), the *Hedonic effect* (perceived emotional value) and the *Perfectionism effect* (perceived quality value) (Vigneron and Johnson 1999). A major characteristic of luxuries is that they lure consumers to pay high prices for luxury goods (Ait-Sahalia et al. 2004; Mason 1981).

Attitudes towards luxury brands might be determined either by their social-adjustive function, which provides social status, or their value-expressive function, which is a self-expression of personality and values (Wilcox et al. 2009). Irrespective of the function that prevails in consumers' mind, a positive attitude towards luxury brands should represent a pre-condition for the development of a (subsequent) positive attitude towards HLCPs. Based on these considerations, we draw the following hypothesis:

H4: Intention to buy HLCPs will be positively affected by a positive attitude towards luxury goods.

2.5 Consumers' cultural differences and their impact on HLCPs' purchase intention

One of the goals of this research is also to examine how cultural differences affect consumers' buying behavior of HLCPs. Our belief is that consumers with different cultural backgrounds have different perspectives when facing similar purchasing events so we compare Western European (Spanish) and Eastern (Taiwanese) cultures.

A first relevant difference affecting consumer behavior is the style of thinking, which emerges from the personal social environment in which consumers are embedded. Monga and John (2010) have recently found that consumer's style of thinking is relevant for product fit evaluation in the case of brand extensions. Consumers from Eastern cultures are generally involved in deep social relationships that stimulate their orientation to pay attention to the context or field as a whole (*holistic* style of thinking). By contrast, Westerns consumers show an *analytic* style of thinking, with a general tendency to focus on attributes of objects. In turn, Eastern holistic thinkers tend to group objects on the basis of their functional or thematic interdependence, by detecting broader connections among objects than Western analytic thinkers (Chiu 1972). This difference affects consumers' evaluation of brand extensions. In the case of functional brands, holistic thinkers perceive more easily product fit among brands

(Monga and John 2010). However no difference emerges in the degree of product fit perception in the case of prestige brands. Given that HLCs simultaneously embody a functional and a prestige dimension, we have no clues about the relative predominance of one style of thinking over the other.

Apart from style of thinking, one of the main differences between Western and Eastern cultures concerns the individualism vs. collectivism tension (Hui and Triandis 1986). While Western culture emphasizes the accomplishment of individual goals, in the Eastern culture the group (e.g., family, friends or colleagues) plays a dominant role where collective goals have precedence over individual ones (Triandis 1989). Such a cooperative conception represents a facet of the collective nature of Eastern culture, which stresses an amiable atmosphere based on social restrictions that is in contrast with the self-centered nature of the Western culture, which relies on independence and personal achievement (McCarty and Shrum 1994). Hofstede (2001) confirms these generalizations for the specific cases of Spain and Taiwan. Among the five dimensions analyzed in his study, Spain and Taiwan show divergent values only in the “individualism vs. collectivism” index – 51 for Spain and 17 for Taiwan. Spain and Taiwan are similar in all the remaining indexes.¹ These cultural differences are also reflected in buying behaviors (McCracken 1988; Wong and Ahuvia 1998): consumers belonging to individualist contexts pursue their own choices first while consumers

¹ Power Distance Index: 57 for Spain, 58 for Taiwan; Masculinity Index: 42 for Spain, 45 for Taiwan; Uncertainty Avoidance Index: 86 for Spain, 69 for Taiwan (Hofstede 2001).

belonging to collectivist cultures take others (such as family and friends) into account. Consumers from individualist cultures are more likely to pursue products of well-known brand names as compared to consumers from collectivistic cultures (Sun et al 2004). Individualism is also positively associated with fashion consciousness and consumer innovativeness (Manrai et al. 2001). Scarcity further enhances consumers' preference and demand towards luxury brands (Lynn 1991), since it is a favorable attribute for luxury brands' buyers (Burns and Brandy 2001; Dubois and Paternault 1995; Park et al. 2008). However, the "rarity principle" is significant only in individualistic cultures (e.g., in the United States) while it does not hold in collective cultures such as Singapore and Hong Kong (Phau and Prenderast 2000). The conclusion is that Asian consumers perceive purchase of luxury brand differently from Western consumers. The available literature shows that, with respect to consumers belonging to collectivist cultures (such as Taiwan), those from individualist contexts (such as Spain) are more influenced by fashion-related brands and are expected to approach the purchase of HLCPs by paying more attention to their luxury component. In turn, Spanish consumers' affective response is expected to dominate over their cognitive response during the purchase process of HLCPs.

Similar differences have been observed in attitudes towards purchase of high-tech products and services (Dwyer et al. 2005; Kumar and Krishnan 2002), even though various studies have obtained contrasting results. The rate of adoption of electric and electronic

appliances is higher in countries characterized by high context cultures – such as Taiwan – when compared with countries characterized by low context cultures – such as the USA (Takada and Jain 1991). The probability of new products' takeoff increases in countries where uncertainty avoidance (Hofstede 2001) is lower, such as in Taiwan with respect to Spain (Tellis et al 2003). Long-term oriented Asian cultures are also characterized by a faster adoption of IT-based innovations (Van Everdingen and Waarts 2003). Other studies highlight the existence of a positive association between the acceptance of new high-tech products and individualism (Yeniyurt and Townsend 2003). Individualistic cultures – such as Western countries – adopt internet and other technological innovations more rapidly than collectivistic cultures – such as Eastern countries (La Ferle et al 2002).

Overall the literature review shows that cultural differences affect consumers' purchase process of HLCPs, even though a unique and consistent suggestion of *how* Taiwanese and Spanish consumers differ in their buying behavior (and, specifically, in their attitude formation) has not been provided. Based on these considerations, we hypothesize:

H5: In the purchase of HLCPs, the buying behavior of Spanish consumers differs from that of Taiwanese consumers.

Figure 1 graphically summarizes our hypotheses and the resulting theoretical model.

Insert Figure 1 here

3. Empirical methodology

Unlike most previous studies on co-branding that use fictitious products, we analyzed consumers' responses to products that already exist in the marketplace. The study used "Samsung Giorgio Armani" and "LG Prada" cell phones that are real life examples of co-branded products that combine the features of high-tech and luxury. All four brands – Samsung, LG, Giorgio Armani and Prada – are authentic brands that respondents could evaluate HLCPs' features of. Two different versions of the questionnaire were used for each HLCP combination and respondents were randomly assigned to one of the two questionnaires.

University students were used to increase the sample's homogeneity and minimize the random error caused by selecting general public (Calder et al. 1981). Participants were undergraduate students from three major universities in the northern part of Taiwan (349 respondents) and one major university in Spain (566 respondents). Five hundred and twenty eight respondents were considered valid in Spain (93%) and 311 in Taiwan (89%). Sixty one percent of the respondents in Spain were women, as opposed to 59% in Taiwan. The ratios of sample size to questionnaire items (30 items) for both samples satisfy the minimum

requirements specified by both Gorsuch (1983) and Thompson (2000).

All measures employed in the study used a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree), and were adapted from previous studies (see table 1). All originally measured items were first translated into Chinese and Spanish by bilingual (fluent in both English and native language) native speakers. Minor translations of semantic differences were discussed to avoid misunderstanding of translation. Both versions of the questionnaire were translated back to English by other native speakers to enhance translation equivalence (Hult et al. 2008). Table 2 shows alpha coefficients for the scales in the two samples by country. All scales' alpha coefficients are above the acceptable Cronbach's alphas cutoff of 0.6.

Insert Table 1 here

Insert Table 2 here

4. Results

We use a multi-group path analysis and AMOS 17 to test our conceptual model across the two countries. The goodness of fit (GFI), comparative fit index (CFI) and the incremental fit index (IFI) are descriptive whole measurements. All values require a minimum value of 0.9 (Bagozzi and Yi, 1988). Another important index of measurement of fit, root mean square error of approximation (RMSEA), had a value less than 0.5, representing good model fit

(Baumgartner and Homburg 1996). Using the χ^2 (chi-square test) to test model fit, which requires χ^2 *p*-value significance larger than 0.05. The models represented in figures 2 and 3 were fitted as a two-group model, which shows an extremely good fit ($\chi^2(2) = 1.18, p = 0.55$); GFI = 1.00; CFI = 1.00; IFI = 1.00; RMSEA = 0.00. After sequentially fixing the non-significant parameters in each sample to zero, we ended up with the models shown in Figures 2 and 3. These models are constrained versions of the theoretical model displayed in Figure 1, except for some direct paths fixed to zero. The resulting standardized parameter estimates and *p*-value for the direct effects are shown in Table 3.

Insert Figures 2 and 3 here

Insert Table 3 here

Table 4 shows the mean and standard deviations (SD) of each scale. The relationships between *affective response* and *intention to buy* and that between *cognitive response* and *intention to buy* are significant in both countries. Thus, H1a1 and H1a2 are supported. The relationship between *affective response* and *cognitive response* is only significant in Spain and the one between *cognitive response* and *affective response* is only significant in Taiwan. Neither relationship is affected by the other. Therefore, H1b is not supported. Because the relationship between *acceptance of high-tech products* and *cognitive response* is significant

only in Taiwan, H1c is only partially supported. On the other hand, the relationships between *attitude towards luxury goods* and *affective response* and between *affective response* and *intention to buy* are significant in both countries. Thus H1d is supported.

Insert Table 4 here

In line with Monga and John (2010), we found that H2a is not supported, given that the relationship between *product fit* and *intention to buy* is significant only in Spain. Similarly, the relationship between *brand fit* and *intention to buy* is significant only in Taiwan, thus H2b is not supported. Hypotheses 2c and 2d are supported. The mean values of both affective and cognitive responses are greater for Taiwan than for Spain ($M_{\text{Spain}} = 3.10 < M_{\text{Taiwan}} = 3.91$ and $M_{\text{Spain}} = 2.38 < M_{\text{Taiwan}} = 3.75$, respectively). Hypotheses 2e and 2f are not supported because the mean values of *affective response* and *cognitive response* are smaller for Spain than for Taiwan.

Consumers of both countries are more familiar with high-tech brands than with luxury brands and the variability of familiarity associated with luxury brands is higher. Given that the relationships between *acceptance of high-tech products* and *intention to buy* are not significant in both countries (Table 3), H3 is not supported. Hypothesis 4, on the other hand, is supported in both the countries because both estimated coefficients are significant. Finally,

the empirical results differ for Taiwan and Spain (when we compare figure 1 with figures 2 and 3). Thus we conclude that H5 is supported.

Even though the model explains a similar percentage of variance of *intention to buy* for the two countries ($R^2_{\text{Spain}} = 0.38$, $SE_{\text{Spain}} = 0.03$; $R^2_{\text{Taiwan}} = 0.37$, $SE_{\text{Taiwan}} = 0.04$), the parameters' estimates shown in table 3 reveal that a different model is needed for Spain and Taiwan. While *affective response* in Spain has a direct impact on *cognitive response*, the causal relationship in Taiwan between the two dimensions is the other way round (from *cognitive response* to *affective response*).

Acceptance of high-tech products does not appear to play any role in the intention to buy HLCPs in Spain even though it has an impact in Taiwan. The posited effect of *acceptance of high-tech products* on *cognitive response* turned out to be insignificant in Spain. Lagrange multiplier tests failed to reveal any significant parameter involving this variable and any other variables of the model, thus this variable can simply be removed from the model for Spain. Additionally, the effect of *brand fit* on *intention to buy* is completely mediated by *cognitive response* in Spain. That is, the direct effect of *brand fit* on *intention to buy* is insignificant yet the indirect effect through *cognitive response* is significant.

Affective response in Taiwan does not play any direct effect on *cognitive response*. The direct effects of the *acceptance of high-tech products* and of *product fit* on *intention to buy* are also not significant. Neither is the posited direct effect of *product fit* and *brand fit* on

affective response. It implies that the effect of *acceptance of high-tech products* on *intention to buy* is completely mediated by the *cognitive response* and the effect of *product fit* on *intention to buy* is completely mediated by the *cognitive response* as well.

Further insight into countries' specific mechanisms that account for *intention to buy* is obtained by computing the direct, indirect and total effects (table 5).

Insert Table 5 here

The standardized total effects of the affective and cognitive responses on *intention to buy* are of similar magnitude in Spain, whereas the cognitive effect is about three times stronger than affective effect in Taiwan. *Product fit's* standardized total effect is similar in size to affective and cognitive responses in Spain. *Attitude toward luxury goods* also plays a major role whereas *brand fit's* total effect is very small. Taiwan presents dissimilar results: *brand fit's* standardized total effect is similar in size to that of *cognitive response*; *product fit* plays a major role, whereas *attitude toward luxury goods* has a very small total effect. The impact of *acceptance of high tech products* on *intention to buy* is marginal in both countries. *Affective response* and *cognitive response* mostly have a direct (not indirect) effect on *intention to buy*.

5. Conclusions

5.1 Discussion

The main purpose of this study was to explore a tri-component attitude model towards co-branded products in which emotions as well as beliefs are predictors of behavioral intentions. Most previous research on co-branding mainly deals with analyzing the impact of antecedents on conative attitude (intention to buy) without untangling the different paths through which the various drivers of co-branding success may impact intention to buy. By decomposing consumers' attitude into its three main components, this paper sheds light on the subtle routes underlying consumer behavior in the case of co-branded products.

We analyze the behavior of consumers in two different countries – Spain and Taiwan – in their purchase of HLCPs and offer suggestions for marketing HLCPs in a cross-cultural context. Though co-branding plays a significant role in the success of corporate brands the cross-cultural comparison within such a context has not been explored yet. Consumers belonging to diverse cultural environments may have different perceptions towards the same product and motivations that drive consumers' behavior in one country may not be valid in another.

Our analyses show that affective and cognitive responses to HLCPs are very similar in Spain and Taiwan: the effect of attitude towards luxury goods on intention to buy, the effect of product fit and brand fit on cognitive response, and the effect of affective and cognitive

responses on intention to buy are very similar in Spain and Taiwan. This evidence suggests that Spanish and Taiwanese consumers do share some common opinions about HLCPs.

Yet several differences remain. Product fit has a direct effect on both affective response and intention to buy only in Spain. Brand fit has a direct effect on intention to buy in Taiwan but not in Spain. The affective response directly affects the cognitive response in Spain while in Taiwan the relationship between those two dimensions has the opposite direction. Furthermore, the magnitude of the relationships varies in the two countries. The estimated coefficient of the attitude toward luxury goods to the affective response in Spain (0.53) is larger than in Taiwan (0.18). The affective response significantly impacts the cognitive response in Spanish consumers so it can be argued that Spanish consumers use their affective response more than their cognitive response to judge luxury brands. When facing HLCPs, it is the affective response, rather the cognitive response, which drives Spanish decisions. This result matches McCracken's (1988) and Wong and Ahuvia's (1998) evidence that in the individualistic, Western culture consumers are more likely to base their purchases on their feelings. The Latin character certainly can influence and be reflected in the central role played by affects.

Spanish consumers consider product fit more relevant than brand fit. Product fit directly affects intention to buy HLCPs, even though such a relationship is also mediated by affective and cognitive responses. In contrast, Taiwanese consumers put less emphasis on product fit –

which only affects their cognitive response – and mainly base their decisions on brand fit – which has a direct effect on intention to buy. The magnitude of the effect of brand fit on the cognitive response is larger for Taiwan (0.24) than for Spain (0.16). Overall, these results offer a challenging picture that partly contradicts previous evidence on the role that brands and fashion exert on consumers coming from individualistic cultures (Manrai et al. 2001; Phau and Prendergast 2000). Our study supports the view that, compared to Eastern consumers, Western consumers place more importance on product-related thoughts (Han and Schmitt 1997; Monga and John 2010, Shavitt et al. 1997). This may arise from the specific attributes of HLCPs, which combine very diverse features of high-tech and luxury.

Our results show that while Spanish consumers follow a Feel-Learn-Do sequence in purchasing HLCPs (i.e., they adopt a “feeler” model of purchasing behavior), Taiwanese consumers seem to follow a Learn-Feel-Do sequence (i.e., they act as “thinkers”). Taiwanese consumers mainly activate their cognitive response: it has a direct effect on intention to buy; it mediates the effects of acceptance of high-tech products, brand fit and product fit on intention to buy; and, it is one of the antecedents of the effect of affective response on intention to buy. The collectivistic nature of Taiwanese culture may partly account for such a result (Liñán and Chen 2009).

The role played by the acceptance of high-tech products is significant only in the Taiwanese case and does not have an effect on Spanish consumers’ purchasing decisions.

This result reflects the higher familiarity that Taiwanese consumers have with specific categories of high-tech products considered in this study, given that Taiwan is the country where several world leading producers come from.

5.2 Managerial implications

The main critical finding of our study is that cultural aspects have a strong impact on consumers' buying behavior of HLCPs. Spanish consumers mainly base purchasing decisions on their own feelings while Taiwanese consumers pay more attention to practical issues and cognitive responses. This result confirms prior research that pointed out the effectiveness of emotional appeals versus rational appeals when attitude is mainly influenced by the affective component (Fabrigar and Petty 1999). Different marketing strategies are required to target the two groups of consumers. The main effort is to adapt communication and advertising policies to the specific cultural context in which HLCPs are distributed. An advertising campaign designed for one country cannot be simply replicated in another without major revisions to the advertising message. Marketing managers can pursue successful strategies that are able to modulate consumers' attitudes and eventually increase the performance of co-branding only by realizing such differences.

Our study also shows that brand familiarity is higher for high-tech brands than for luxury brands, both in Spain and Taiwan. Although HLCPs combine two diverse components

within one product, consumers' buying behavior is asymmetrically influenced by the two. This finding has immediate managerial implications. First, it suggests high-tech producers to co-brand with well-known luxury partners to overcome the lower familiarity that consumers have with luxury brands. This result is in line with previous research on co-marketing alliances, which shows that alliances are more attractive if the strengths of partnering brands are somehow comparable (Venkatesh et al., 2000). Second, it suggests emphasizing the luxury features of these products when advertising and promoting HLCPs because luxury is the weaker component of the co-branded product.

5.3 Limitations and future research

This study has limitations that could be addressed by future research. First, it uses a convenience sample of university students as respondents. Although student samples reduce problems of heterogeneity, caution is needed to generalize the results to the general public. Future research should aim to extend respondents to other than students.

Second, we only considered two very specific HLCPs, even though there are many others HLCPs in the market. We may employ other HLCPs in our survey to make the study more complete and representative for other product categories. The generalizability of the cultural differences that we observe in our study could be assessed across various product categories.

The study should be replicated in countries that present the same contrasting cultural characteristics (e.g., individualism vs. collectivism) as those that we observed in Taiwan and Spain. It would then be possible to assess whether or not our results depend on those general cultural characteristics or are rather the result of the specific countries that we chose for the analysis.

6. References

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Figure 1

The overall conceptual model

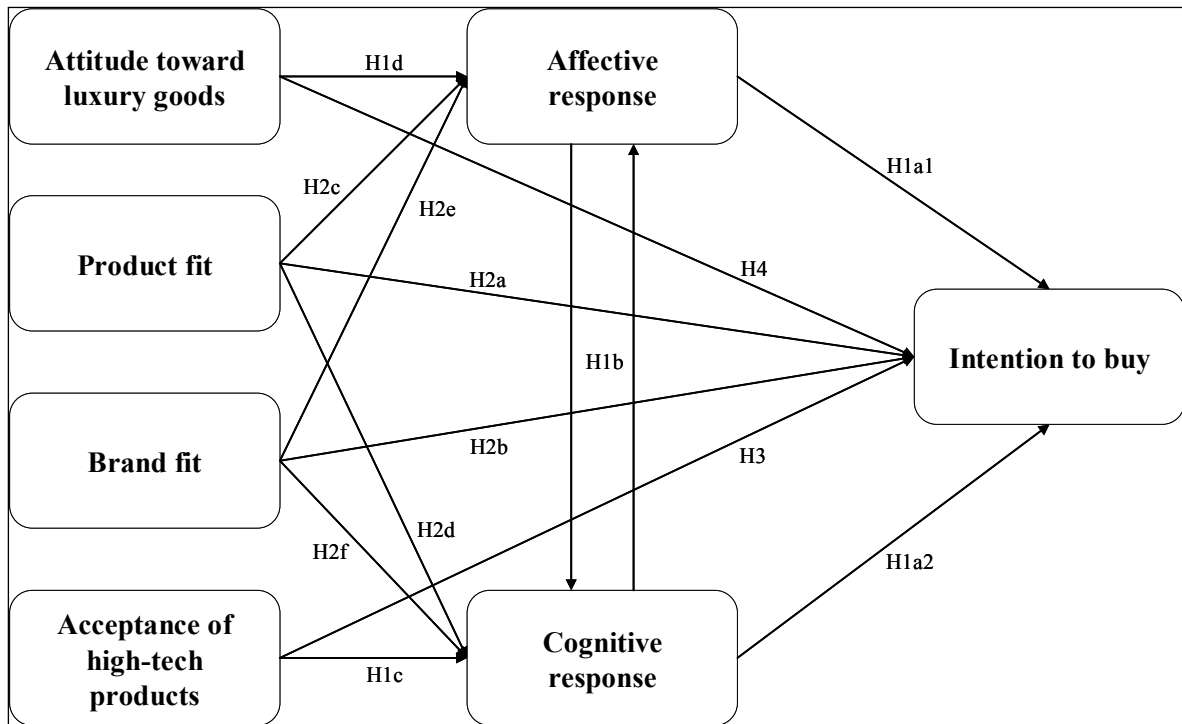
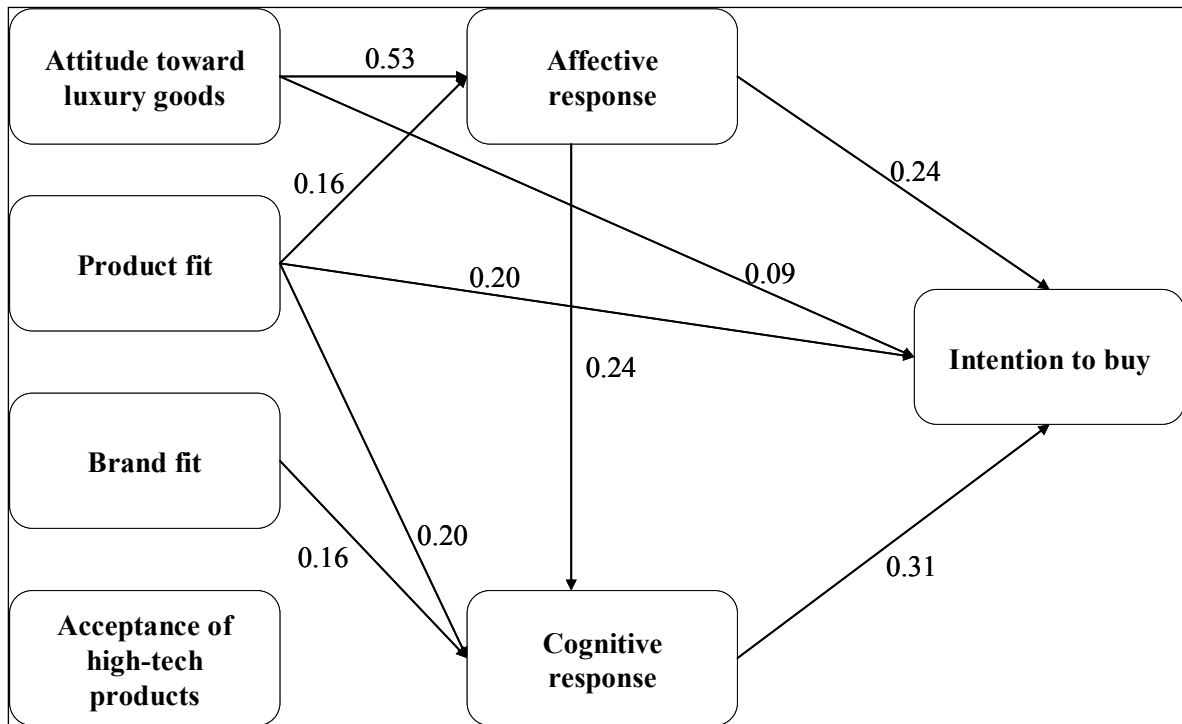


Figure 2

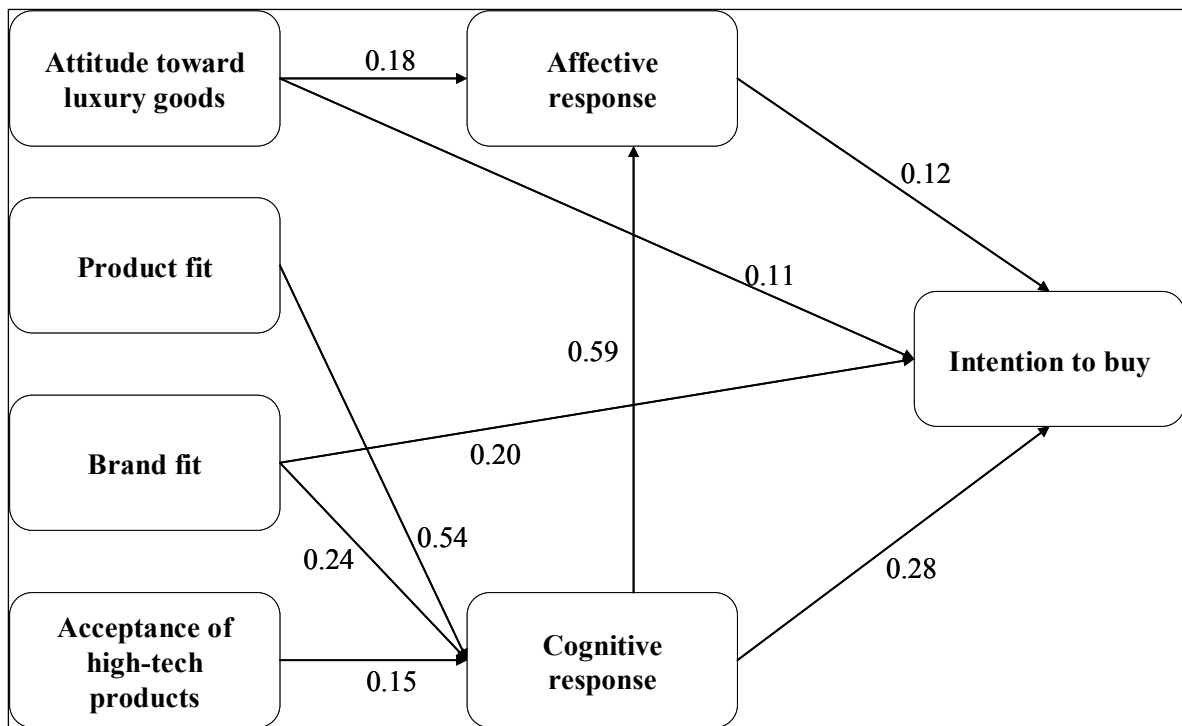
Empirical estimation: Spain



Note: Only significant coefficients are represented.

Figure 3

Empirical estimations: Taiwan



Note: Only significant coefficients are represented.

Table 1

Scales used in the study

| Measure | Number of items | Source |
|----------------------------------|-----------------|------------------------------|
| Affective response | 2 | Ratchford (1987) |
| Cognitive response | 2 | Ratchford (1987) |
| Intention to buy | 4 | Baker and Churchill's (1977) |
| Brand fit | 3 | Simonin and Ruth (1998) |
| Product fit | 3 | Simonin and Ruth (1998) |
| Acceptance of high-tech products | 8 | Roehm and Sternthal (2001) |
| Attitude toward luxury brands | 8 | Wilcox et al. (2009) |

Table 2

Scales' alpha coefficients

| Measure | Alpha coefficient | |
|----------------------------------|-------------------|-------|
| | Taiwan | Spain |
| Affective response | 0.78 | 0.85 |
| Cognitive Response | 0.69 | 0.85 |
| Intention to buy | 0.92 | 0.86 |
| Brand fit | 0.89 | 0.70 |
| Product fit | 0.89 | 0.80 |
| Acceptance of high-tech products | 0.94 | 0.92 |
| Attitudes toward luxury brands | 0.92 | 0.92 |

Table 3

Structural equation model results

| Hp.s | Proposed path | Spain | | | Taiwan | | |
|------------------|-------------------------|-------|-----------------|---|--------|-----------------|----|
| | | Coef. | <i>p</i> -value | * | Coef. | <i>p</i> -value | * |
| H _{1a1} | Affective → Intention | 0.24 | 0.000 | * | 0.12 | 0.070 | ** |
| H _{1a2} | Cognitive → Intention | 0.31 | 0.000 | * | 0.28 | 0.000 | * |
| H _{1b} | Affective → Cognitive | 0.24 | 0.002 | * | -0.09 | 0.687 | |
| | Cognitive → Affective | -0.05 | 0.484 | | 0.59 | 0.005 | * |
| H _{1c} | High-tech → Cognitive | -0.02 | 0.663 | | 0.15 | 0.008 | * |
| | Cognitive → Intention | 0.31 | 0.000 | * | 0.28 | 0.000 | * |
| H _{1d} | Luxury → Affective | 0.53 | 0.000 | * | 0.18 | 0.000 | * |
| | Affective → Intention | 0.24 | 0.000 | * | 0.12 | 0.070 | ** |
| H _{2a} | Product fit → intention | 0.20 | 0.000 | * | 0.06 | 0.553 | |
| H _{2b} | Brand fit → Intention | 0.03 | 0.651 | | 0.20 | 0.025 | * |
| H _{2c} | Product fit → Affective | 0.16 | 0.006 | * | 0.06 | 0.674 | |
| H _{2d} | Product fit → Cognitive | 0.20 | 0.001 | * | 0.54 | 0.000 | * |
| H _{2e} | Brand fit → Affective | 0.08 | 0.152 | | 0.08 | 0.347 | |
| H _{2f} | Brand fit → Cognitive | 0.16 | 0.011 | * | 0.24 | 0.011 | * |
| H ₃ | High-tech → Intention | 0.02 | 0.666 | | -0.06 | 0.186 | |
| H ₄ | Luxury → Intention | 0.09 | 0.038 | * | 0.11 | 0.036 | * |

* $p < 0.05$; ** $p < 0.10$.

Table 4

Mean values and standard deviations of items

| Item | Spain | | Taiwan | | t-test on Mean difference |
|--|-------|------|--------|------|---------------------------|
| | Mean | SD | Mean | SD | P-value |
| Brand familiarity: | | | | | |
| - LG (3 items) | 5.79 | 1.01 | 5.44 | 1.20 | 0.003 * |
| - Samsung (3 items) | 5.85 | 1.09 | 5.40 | 1.36 | 0.000 * |
| - Prada (3 items) | 4.70 | 1.46 | 4.41 | 1.97 | 0.112 |
| - Giorgio Armani (3 items) | 5.52 | 1.21 | 3.85 | 2.01 | 0.000 * |
| Attitude toward luxury goods (8 items) | 3.24 | 1.40 | 3.85 | 1.40 | 0.000 * |
| Product fit (3 items) | 3.50 | 1.28 | 3.62 | 1.29 | 0.186 |
| Brand fit (3 items) | 3.42 | 1.23 | 3.31 | 1.33 | 0.243 |
| Acceptance of high-tech products (8 items) | 5.38 | 1.06 | 5.35 | 1.10 | 0.639 |
| Affective response (2items) | 3.10 | 1.57 | 3.91 | 1.40 | 0.000 * |
| Cognitive response (2 items) | 2.38 | 1.29 | 3.75 | 1.33 | 0.000 * |
| Intention to buy (4 items) | 2.73 | 1.40 | 3.09 | 1.42 | 0.000 * |

* $p < 0.05$

Table 5

Standardized total, indirect and direct effects on intention to buy

| Spain | | | |
|----------------------------------|--------------|---------------|-----------------|
| | Total effect | Direct effect | Indirect effect |
| from: | | | |
| Attitude toward luxury goods | 0.25 | 0.09 | 0.16 |
| Product fit | 0.31 | 0.20 | 0.11 |
| Brand fit | 0.10 | 0.03 | 0.07 |
| Acceptance of high-tech products | 0.01 | 0.02 | - 0.01 |
| Affective response | 0.32 | 0.24 | 0.08 |
| Cognitive response | 0.29 | 0.31 | - 0.02 |
| Taiwan | | | |
| from: | | | |
| Attitude toward luxury goods | 0.12 | 0.11 | 0.01 |
| Product fit | 0.24 | 0.06 | 0.18 |
| Brand fit | 0.29 | 0.20 | 0.09 |
| Acceptance of high-tech products | - 0.02 | -0.07 | 0.05 |
| Affective response | 0.09 | 0.12 | - 0.03 |
| Cognitive response | 0.34 | 0.28 | 0.08 |

Note:

(1) Total effect = Direct effect + Indirect effect.

(2) Indirect effect = Indirect effect via affective response + Indirect effect via cognitive response