Co-branding strategies applied to high-tech products and luxury brands: A cross-cultural perspective

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Abstract
The increasing importance of co-branding as a marketing strategy opens up a broad range of interesting research questions. In this study we address the phenomenon of co-branding between firms that belong to different and unrelated value chains, namely co-branding between high-tech products and luxury brands. Furthermore, we explore differences in preferences and behavior of consumers coming from diverse countries (Spain and Taiwan) with diverse cultures. Results show that Western consumers rely more on affective responses, while Eastern consumers rely more on cognitive responses.
1. Introduction
As developments of marketing strategies have diversified, the topic of co-branding has been of great concern to marketing researchers and practitioners for many years. Marketers are increasingly interested in co-branding strategies as a means to enter new product categories, gain more marketplace exposure and 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 Ruckert, 1994, pg. 87). As a matter of fact, until 2008 co-branding strategy was still kept 40 percent increasing rate/year in American (Fang and Wu, 2009). It means even when firms suffering from economics crisis, a co-branding strategy were still a prevailing strategy (Lee et al., 2006); thus it is becoming a common strategy adopted by many firms and famous brands to enhance a signal of product quality.

Within this scenario, the primary objective of our study is to shed light on the effects of new forms of co-branding strategies. 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’ purchasing intention is affected by the characteristics of such an alliance. Furthermore, we compare the behavior of consumers from two different countries – Spain and Taiwan – in order to assess the role played by cultural features on the purchasing process.

Previous research discussed co-branding strategies in arts (D’astous et al., 2007), food (Ueltschy and Laroche, 2004; Kumar, 2005; Wright et al., 2005), industrial products (Bengtsson and Servais, 2005; Erevelles et al., 2008), sport products (Motion et al., 2003), advertisement (Grossman, 1997; Monga et al., 2007), airlines (Tsantoulis and Palmer, 2008), and franchises (Wright and Frazer, 2007). Few works investigate co-branding in the high-tech industry (Sengupta and Perry, 1997; Stuart, 1998), and, to the best of our knowledge, no study investigated the association of high-tech and luxury brands.

Our attention to high-tech luxury co-branded products (HLCPS) mainly responds to their increasing presence in the market. In the phenomenon of fast technological progress, consumers find it difficult to sensibly assess and compare the offering of high-tech products. Trusting brand names is, therefore, a good way for consumers to choose products (Aaker and Jacobson, 2001). For instance, in the electronic product market, it is easy to find that there are many co-branded products created by both high-tech companies and luxury brands. Those co-branded products vary from small electronic accessories to 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 those examples share a common, challenging aspect that is worth of attention: contrary to the typical cases of horizontal or vertical co-branded products (Begemann, 2008; Helming et al., 2008), HLCPs involve firms (and products/brands) located in two different value chains. Hence, 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 fully analyzed by the marketing literature.

Furthremore, we are interested in assessing how cultural aspects affect consumers’ purchasing process of HLCPs. There are a lot of the same products sold in Eastern and Western countries. However, it does not mean that Eastern have in common with Western the same perceptive to buy the same products. Researchers indicate that culture significantly influences consumer behavior (Engel et al., 2001; Kotler, 2002; Lim and Ang, 2008). McCracken (1998) also points out that consumer behavior is a cultural phenomenon, and the relationship between culture and consumer behavior is strong and complicatedly interactive. Thus, adding a cultural dimension to our theoretical framework allows us to obtain a more complete picture of the co-branding phenomenon.

The remaining of the paper is organized as follows. In Section 2, we present a review of the relevant literature and formulate our main hypotheses. In Section 3, we discuss the empirical methodology and describe the data used for the analysis. In Section 4 we show the obtained results. Finally, in Section 5, we provide a discussion of our findings, by focusing particular attention on managerial implications arising from the study.

2. Literature review and hypotheses

Even though a commonly accepted definition does not exist, co-branding is generally referred to as two or more branded products to form a third and unique branded product in technology development, marketing, or production, capable of gaining a distinctive advantage (Park et al., 1996; Washburn et al., 2000).

Co-branding is, however, a risky strategy. As a consequence of an increasingly global competition in the marketplace, Knudsen et al. (1997) find that only one in five attempts to merge brands are successful, and it also carries some risks such as causing consumer mistrust (Aaker, 1996), damaging the brand image of the host firm (Chang, 2009), diluting the brand equity of the host firm (Washburn et al., 2000; Ultsch and Laroche, 2004), and increasing the financial burden of the host firm (Blackett and Boad, 1999). Park et al. (1996) mention as well that the alliance between two brands may cause a confused feeling among consumers about the image of both brands, and consequently it might damage the brand equity of each
brand. Thus, understanding which conditions determine the success of co-branded products becomes crucial.

2.1 Acceptance of high-tech products
Provided that HLCPs are based on a high-tech product with an additional luxury attribute, one of the first elements 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. However, shopping for high-tech products has always been a big challenge. 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. Therefore, the acceptance of high-tech products and the ability to appraise their characteristics represent a key determinant of a consumer’s intention to buy.

In general terms, the concept of acceptance refers to the consumers’ reaction to the image of the product/brand that will lead to purchase and use (Spreng et al., 1996; Salamoura, 2005). However, it is difficult for a new product to be successful, and the probability of success is normally very small (Sloan, 1994). From simple domestic appliances to complex high-tech computer networks, marketing high-tech products is doomed to failure (Goffin and New, 2001). In order to face competition, minimize uncertainty and maximize acceptance of new products, in-depth understanding of and predicting consumer perceptions has become a critical issue (Salamoura et al., 2008; Gofaman et al., 2009). Nevertheless, consumers’ behavior has become less consistent and fragmented, and it is increasingly difficult to predict (Imram, 1999). Hence, companies should treat consumers’ opinions and feedback seriously in order to accelerate new products’ acceptance and maximize the likelihood of success. Therefore, we hypothesize:

H1: The higher the degree of acceptance of high-tech products, the higher the likelihood of success (i.e., the higher the consumers’ intention to buy) of HLCPs.

2.2 Consumers’ attitude towards luxury goods
According to the theory on the hierarchy of needs (Maslow, 1970), higher needs (esteem and self-actualization) are met when lower needs have already been satisfied. In order to pursue higher mental and material living quality, the purchase of luxury goods becomes a viable alternative. Products, indeed, play two roles in society
(Solomon, 1983). On the one hand, they participate in the satisfaction of consumers’ needs. On the other, they represent symbols of social status. Luxury goods mainly respond to this second function.

Consumers usually buy luxury goods to advertise their wealth and communicate their higher social status. They focus on intangible attributes (e.g., vanity or satisfaction), and this focus directs their buying behavior and shapes their individual images. Often, the main intention of such a buying behavior is to impress others with symbols of money, thus creating a distinction between ordinary class people and uphold higher social status (Manson, 1981).

Overall, the motivation for purchasing luxury goods has been analyzed by researchers, and several factors have been proposed, from conformity and social recognition (Park et al., 2008), to parental influence (Prendergast and Wong, 2003), and to social acceptance (Summers, 2006). Vigneron and Johnson (1999) also mention that 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). Furthermore, the characteristic of luxuries is that they please and lure consumers to spend high prices purchasing luxury goods (Mason, 1981; Ait-Sahalia et al., 2004; Kort et al., 2006). Attitudes towards luxury brands might be determinate by their social-adjustive function, providing social status, or value-expressive function, as self-expression of personality and values (Wilcox et al., 2009).

Based on these considerations, we draw the following hypothesis:

**H2:** Intention to buy HLCPs will be positively affected by a positive attitude towards luxury goods.

### 2.3 Brand fit, product fit and direct effects

If successful, co-branding creates an assurance about product quality, which brings higher product evaluations, better evaluation of brand quality and higher premium prices (Rao and Ruekert, 1994; Rao et al., 1999). Moreover, limiting the risk of entering a new product category, increasing sales revenue, and enhancing consumers’ positiveness about a product are also direct effects of co-branding (Aaker, 1996). In terms of characteristics of constituent brands/products, researchers find that in order for co-branded products to be successful it would be better if the degrees of awareness, brand equity and quality of the constituent brands were high (Blackett and Boad, 1999; Desai, 2000; Kippenberger, 2002; Motion et al., 2003; Ueltschy and Laroche, 2004; Washburn et al., 2000; Rao et al., 1999; Park et al., 1996;
Tsantoulis and Palmer, 2008). Also, customers are easily attracted by familiar brand names associated with co-branded products (Yeung and Wyer, 2005).

The relationship existing among constituent brands matter in determining success of co-branded products. Simonin and Ruth (1998) define “product fit” as consumer perception of the extent of compatibility of two product categories and “brand fit” is the degree of consistency of brand images of each partner. Researchers assert that a co-branded product with a high degree of fit could induce a positive evaluation toward co-branded products (Aaker and Keller, 1990; Bhat and Reddy; 1998; Boush and Loken, 1991). In turn, the likelihood of success of a co-branded product increases if brand fit (brand association) or product fit (categories fit) are high (Geuens and Pecheux, 2006; Helmig et al., 2007; Menon and Kahn, 2003; Simonin and Ruth, 1998), and the complementary degree of constituent brands is high (Park et al., 1996; Lee et al., 2006; Monga and Lau-Gesk, 2007). Hence, if the brand fit and product fit of two constituent brands are inconsistent, the co-branded product may create unpleasant beliefs and judgments in consumers.

Based on these considerations, we draw the following hypothesis:

H3a: The higher the product fit, the higher the likelihood of success (i.e., the higher the consumers’ intention to buy) of HLCPs.

H3b: The higher the brand fit, the higher the likelihood of success (i.e., the higher the consumers’ intention to buy) of HLCPs.

2.4 Consumers’ attitude
There are two main dimensions of attitude that affect consumer buying behavior: the cognitive (thinking, learning, processing information) and the affective (feeling and emotion) aspects (Laurent and Kapferer, 1985; Putrevu and Lord, 1994; Colendrino-Bucu et al., 1998; Dube et al., 2003). Neisser (1967) defines cognition as a mental input process which is transformed, stored and used. Knowledge, awareness, thought, opinion, perception and belief would be generated by cognitive responses in a consumer’s mind. Keller (2003) and Malhotra (2005) also mention that cognitive evaluation is considered to be a general method to evaluate brand image in recent decades. Similarly, De Chernatony (2002) finds that when consumers evaluate a corporate brand, they always assess the rational part of the brand prior to its emotional part. Hence, 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). Cognitive brand attributes
have, likewise, the most essential influences on brand preferences and those attributes of the brand are exclusive and significant (Da Silva and Syed Alwi, 2006).

Contemporary brand image studies have also focused their attention on affective aspects of consumer behavior (Aaker et al., 1982; Batra and Ray, 1985; Burk and Edell, 1989). The definition of “affectation” includes mental status exclusively characterized by experienced feelings, emotions and moods such as happiness, anger, depression, gladness and fear. Consumers might experience those perceptions in a different intensity. In addition, an affective response is based on feelings towards a special stimulus related to cognitive effort (Westbrook, 1987; Anand et al., 1988; Dacko, 2008) and the affective process is composed of a source of human motivation and its influence on product selection. Typically, an affective judgment is a crucial determinant for daily consumption experiences (Anand et al., 1988) and consumers use it to form a priori consumption experience on which they base their future purchasing decisions (Cowley, 2007). Thus, an affective response strongly affects a consumer’s purchase of a product or service (Allen et al., 1992; Barsky and Nash, 2002). Further, when evaluating a brand image, consumers commonly assess both cognitive and affective aspects, and receive from them indication for quality perceptions and intrinsic (product quality) and extrinsic (price) product characteristics (Compeau et al., 1998; Da Silva and Syed Alwi, 2006). For example, consumers usually use affective attributes to consider hedonic products (Maon and Oliver, 1993), and cognitive attributes to consider utilitarian products (Hirschman, 1980). In the case of HLCPs, provided that they simultaneously present a high-tech and a luxury component, we believe that both the cognitive and the affective responses take part in the purchasing process.

However, the direction of causality between the two components of a consumer’s attitude has not been fully described (Tsai, 1985). Consumers’ cognitive responses are prior to affective responses in the traditional concept (Anand et al., 1988). In addition, typically, a consumer’s cognitive response impacts the affective response and provides a basis to convey a belief (Bhat and Reddy, 1998; Johnson and Grayson, 2005; Lewis and Weigert, 1985). Conversely, Zajonc (1980), and Helgeson and Ursic (1994) express different opinions and claim that, in consumers’ mind, affective responses are more basic and come first to affect their cognitive responses.

Consequently, we derive the following hypotheses:

**H4a1:** In the purchase of HLCPs, affective responses positively affect consumers’ purchasing intention.

**H4a2:** In the purchase of HLCPs, cognitive responses positively affect consumers’
purchasing intention.

**H4b**: In the purchase of HLCPs, cognitive and affective responses of consumers’ behavior affect each other.

2.5 Consumers’ cultural differences

As stated above, one of the goals of this research is to examine how cultural differences affect consumers’ buying behavior of HLCPs. Mainly, we are interested in comparing Western European (Spanish) culture with Eastern (Taiwanese) culture. Our belief is that consumers with different cultural backgrounds have different perspective when facing similar purchasing events.

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 (i.e., it has an intrinsic individualistic nature), in the Eastern culture the group (e.g., family, friends or colleagues) plays a predominant role, and collective goals are predominant with respect to individual goals (Triandis, 1989). Such a cooperative conception, opposed to an individual conception, represents a facet of the collective nature of Eastern culture (McCatry and Shrum, 1994), which stresses the importance of enjoying an amiable atmosphere based on social restrictions and which contrasts the self-centeredness nature of the Western culture that relies on independence and personal achievement (Cai, 1996). In his empirical investigation on cultural dimensions, Hofstede (2001) confirms such suggestions also for the specific cases of Spain and Taiwan. Indeed, among the five dimensions analyzed in his study, only in the “individualism vs. collectivism” index Spain and Taiwan show divergent values – 51 for Spain and 17 for Taiwan. In all the remaining indexes, the values for Spain and Taiwan are more similar.

Western culture emphasizes the independence, autonomy and self-determination, namely individualism. Children in Western families are expected to be independent, have their own opinions to make decisions and express directly what they think. On the contrary, Eastern cultures are influenced by three predominant schools of thought – Confucianism, Taoism and Buddhism – that emphasize the importance of harmony in the family and society. Children in this culture are taught to learn the importance of getting on well with others. Each one should create a good relationship with others and give groups a first place before he/she starts to do everything. Nothing becomes more important than the harmony of a group or a family (Wheeler et al., 1989). Children mostly need to obey their parents’ instructions and are not allowed to express self-conscious opinions. Thus, while
collectivist cultures tend to foster “the self as inseparable from others and social context”, individualist cultures tend to foster “the self as comprising a unique set of internal attributes including motivations, traits, and values” (Aaker and Williams, 1998, p. 242). In turn, such differences are also reflected in their respective buying behaviors (McCracken, 1988; Wong and Ahuvia, 1998): consumers belonging to individualist contexts pursue their own feelings first; consumers belonging to collectivist contexts take into account others (such as family and friends) in their buying behavior. For example, Sun et al. (2004) indicate that consumers from individualist cultures are more likely to pursue products of well-known brand names comparing with consumers from collectivistic cultures. Furthermore, individualism is positively associated with fashion consciousness and consumer innovativeness (Manrai et al., 2001).

Luxury brands, specially the West brands, exert a fascination among Easter consumers. The marketing strategy of luxury brands in Asia is that through advertising appeals let consumers feel once owning luxury brands, consumers will have high-end experience with the country of origin. For example, the president of Comité Colbert, Christian Blanckaert, said that the marketing strategy of Comité is easy: “We promote the idea that luxury and France are synonymous.” Further, luxury brands marketers use subtler marketing strategies, such as investing large sums of money to promote luxury brands to educate consumers what “luxury” is, inviting celebrity endorsed products, using one-on-one marketing to provide personalized service for elite clientele, giving cosmetics and samples of products to influential people to create a fashionable atmosphere, creating exclusive brand images through hiring designers to design limited products. Since scarcity is a prominent attribute for luxury brands buyers (Burns and Brandy, 2001; Dubois and Paternault, 1995; Park et al., 2008), and this attribute enhances consumers’ preference and demand toward this brand (Lynn, 1991). In terms of rarity principle, Phau and Prenderast (2000) conclude that rarity principle is significant in the individualistic culture, for example, the United State. However, this theory is not supported in the collective cultures such as Singapore and Hong Kong. It infers that Asia consumers have difference perceptive in purchasing luxury brands compared with the West consumers.

The high-tech industry of Taiwan has more advanced development and it generates 15% of Taiwan’s GDP in 2008. In Taiwan, there are many native internationally high-tech companies, such as ACER, ASUS, HTC and so forth. Market Intelligence & consulting Institute (MIC) of Taiwan declared that in 2009 Taiwan was the world’s top foundry industry, IC assembly industry and LED (Light Emitting Diode) producing country. Further, from the e-government report of Brookings Institute in 2008, the annual ranking of e-government of Taiwan was number two (the first one is Korea)
around the world, and in the annual report of Economist Intelligence Unit (EIU) also pointed out in 2008 the Information Technology (IT) competitiveness of Taiwan was ranked number two as well (Spain was twenty-three).

Relatively, the United Nations World Tourism Organization (UNWTO) announced that Spain was the second most travelled to destination in the world in 2009 (The first one is France). According to the statistics data of National Statistics Institute of Spain, National Central Bank of Spain, and Ministry of Industry, Tourism and Trade of Spain, tourism contributed about 11% of Spanish GDP, and about 12% of population work for tourism industry in 2008. Tourism, hence, is obviously an important industry in Spain and deeply affected Spanish economic development and social welfare (Blake, 2000), and is a good antidote to the deep economic crisis (Urtasun and Gutierrez, 2006).

Comparing with Spanish, the penetration of new technologies and high-tech products is deeper in Taiwan than in Spain. For example, in 2007 Taiwan telecommunications companies launched a popular payment system called “Telepay”. This system is that when consumers doing a shopping, if the payment is not over about 75 Euros, they could use their cell phone to pay the money through Telepay system without using money or credit cards. Besides Telepay, the other popular electronic payment system is called “iCash”. This card is one kind of electronic wallets. Consumers use iCash card to touch the payment sensor; then they could take public transportation system instead of using cash to buy tickets and buy foods and drinks in convenient stores as well. From the 2009 user statistics data of “Facebook”, the popular social network website, 23% of population of Taiwan is Facebook user. This figure is larger than 16% of Spain. Hence, having been imperceptibly influenced by what Taiwanese constantly sees and hears about hi-tech products. The HLCPs of buying behavior of Taiwanese consumers should be different form it of Spanish consumers.

Therefore, we claim:

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

Figure 1 offers a graphical representation of the complete theoretical model.

**INSERT FIGURE 1 HERE**

3. **Empirical methodology**

Unlike most previous co-branding research that used fictitious products, it is critical
to use genuine existing products so that through this study may account for consumers’ perspectives toward the co-branding strategy. The study was conducted in two authentic HLCPs: Samsung Giorgio Armani cell phone and LG Prada cell phone. We selected the products in such a way that both products combine the features of hi technology and luxury into one product. All four brands - Samsung, LG, Giorgio Armani and Prada - are authentic brands; hence respondents could intuitively evaluate HLCPs and express their opinions when they fill out the questionnaire. Two different questionnaire versions for each HLCP, respondents were randomly assigned to one of the two questionnaires. Path analysis of structural equations model was used for measuring consumers’ perspectives for HLCPs in cross cultural comparison.

In order to get the sample homogeneity, we chose student samples to minimize random error caused by selecting general public (Calder et al., 1981). Participants for this main study were undergraduate students from three major universities in northern part of Taiwan and one major university in Spain. Questionnaires were filled out by 566 students in Spain and 349 students in Taiwan, 528 valid questionnaires in Spain (93%) and 311 valid questionnaires in Taiwan (89%) being collected. Of the respondents, 61% in Spain and 59% in Taiwan are female. The sample sizes of two countries fit Lomax’s (1989) statement, and if consider the ratio of sample size and questionnaire items (31 items), the sample sizes are also satisfied with the criteria of Gorsuch (1983) and Thompson (2000). All measures used here were through seven-point Likert scales from 1 (strongly disagree) to 7 (strongly agree). Measures of the attitude toward hi-tech products were adapted from Roehm and Sternthal (2001). Brand fit and product fit were measured using scales from Simonin and Ruth (1998). The scales of attitude toward luxury brands were adapted from Wilcox et al. (2001). Use Ratchford’s (1987) scales to measure affective and cognitive response. In addition, Baker and Churchill’s (1977) scales to measure intention to buy HLCPs. All originally measured items were first translated into Chinese and Spanish by native speaker translators who are bilingual expert fluent in both English and Chinese, and English and Spanish respectively. To avoid unnecessary misunderstanding of translation, minor translations of semantic differences were discussed. For the reason of accuracy and consistency of translations, both questionnaire versions were translated back to English by other native speakers to enhance translation equivalence (Hult et al., 2008). The scales’ reliability as assessed by coefficient alpha in two country samples were Taiwan=0.94 and Spain=0.92 (Attitude towards to hi-tech products), Taiwan=0.89 and Spain=0.70 (Brand fit), Taiwan=0.89 and Spain=0.80 (Product fit), Taiwan=0.92 and Spain=0.92 (Attitude towards to luxury brands), Taiwan=0.78 and Spain=0.85 (Affective responses), Taiwan=0.69 and Spain=0.85 (Cognitive Responses) and Taiwan= 0.92 and Spain=0.86 (Intention to buy). All scales
represent above the acceptable cutoff of Cronbach’s alphas cutoff of 0.6.

4. Results
In order to test the hypotheses, path analysis was used to analyze multi-group analysis among factors in two countries. Using maximum likelihood, we obtained a good model fit ($\chi^2(6) = 6.04, p = 0.42$) given the sample size. Interestingly, different parameter estimates failed to be statistically significant in different samples. After sequentially fixing to zero the non-significant parameters in each sample we ended up with two separate models. These models are just constrained versions of the theoretical model displayed on 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 1.

**INSERT TABLE 1 HERE**

Table 2 shows the mean and standard error (SD) of each scale. In two countries, consumers have higher brand familiarity in hi-tech brands than luxury brands, and the brand familiarity of luxury brands are more variable. The mean of the acceptance of high tech products in Spain is 5.38 and Taiwan is 5.35. However, in table 1, the relationship of high-tech to intention is not significant in both countries. Hence, $H_1$ is not supported. $H_2$ are supported in two countries. The mean of product fit is $M_{Spain} = 3.50 < M_{Taiwan} = 3.62$, but “product fit to intention” only in Spain is significant. Hence, $H_{3a}$ is not supported. Also the mean of affective responses is $M_{Spain} = 3.10 < M_{Taiwan} = 3.91$ and the mean of cognitive responses is $M_{Spain} = 2.38 < M_{Taiwan} = 3.75$. The mean of brand fit is $M_{Spain} = 3.42 > M_{Taiwan} = 3.31$, but “brand fit to intention” only in Taiwan is significant. Therefore, $H_{3b}$ is not supported. Also, the mean of affective responses and cognitive responses in Spain are smaller than Taiwan. “Affective to intention” and “cognitive to intention” in both countries are significant. Thus, $H_{4a1}$ and $H_{4a2}$ are supported. “Affective to cognitive” is only significant in Spain, and “cognitive to affective” is only significant in Taiwan. Both relationships are not affected each other. Therefore, $H_{4b}$ is not supported. Furthermore, the relationship in “high-tech to cognitive” is significant only in Taiwan, while the relationships among “luxury to affective” and “affective to intention” are significant in both countries. Overall, we conclude that $H_5$ is supported.

**INSERT TABLE 2 HERE**
The model explains a percentage of the variance of the endogenous variables: affective responses \((R^2_{Spain} = 0.34; SE_{Spain} = 0.04; R^2_{Taiwan} = 0.53; SE_{Taiwan} = 0.04)\), cognitive responses \((R^2_{Spain} = 0.20; SE_{Spain} = 0.03; R^2_{Taiwan} = 0.50; SE_{Taiwan} = 0.13)\) and intention to buy \((R^2_{Spain} = 0.36; SE_{Spain} = 0.03; R^2_{Taiwan} = 0.57; SE_{Taiwan} = 0.04)\). From the results, we see that the overall percentage of variance of intention to buy explained in each country is similar (38% in Spain vs. 37% in Taiwan); however, the parameter estimates shown in Table 1 reveal that a different model is needed for Spain and Taiwan. In Spain, there is a direct effect of affective responses on cognitive responses. In contrast, in Taiwan there is a direct effect of cognitive responses on affective responses.

Furthermore, in Spain, attitudes towards the acceptance of high-tech products do not appear to play any role in the intention to buy HLCPs considered in this study (but they do in Taiwan). More specifically, the posited effect of attitudes towards the acceptance of high-tech products on cognitive responses failed to be significant in Spain. Lagrange multiplier tests (aka modification indices in the SEM literature) failed to reveal any significant parameter involving this variable and any other variables of the model. For this product, this variable can simply be removed in Spain. Additionally, the effect of brand fit on intention to buy is completely mediated by cognitive responses in Spain (i.e., the direct effect of brand fit on intention to buy is non-significant, yet the indirect effect through cognitive responses is significant).

As mentioned, in Taiwan, there is no direct effect of affective responses on cognitive responses. Also, the direct effects of attitude towards the acceptance of high-tech products and of product fit on intention to buy are not significant. Neither is the posited direct effect of product fit and brand fit on affective responses. It implies that the effect of attitudes towards the acceptance of hi-tech products on intention to buy is completely mediated by cognitive impression, and the effect of product fit on intention to buy is completely mediated by cognitive responses.

5. Conclusions

The main purpose of this study was to explore a cross-culture model of consumers buying behavior in two different countries, Spain and Taiwan, in the case of HLCPs. Although a co-branding strategy plays a significant role in the success of corporate brands, the cross-cultural comparison in such a context has not been fully discussed
yet. People in different cultural environments perceive the same item differently. Motivations and reasons for consumers’ buying behavior in one country are not necessarily identical in another country.

Our analysis shows that Spanish and Taiwanese consumers differ in terms of acceptance of high-tech products, affective and cognitive responses, perception of co-branded product fit and brand fit, and their respective impact on intention to buy. For example, only in Spain product fit simultaneously affects consumers’ affective responses and intention to buy. By contrast, brand fit in Taiwan has a direct effect on intention to buy, but such a relationship does not appear in Spain. In the same vein, the effect of attitude toward luxury brands on affective responses in Spain (0.53) is larger than that in Taiwan (0.18). Thus, it seems that Spanish consumers use more affective responses to judge luxury brands. This result matches the McCracken’s (1988) and Wong and Ahuvia’s (1998) demonstration that, according to an individualistic approach, Western consumers are more likely to base their purchases on their feelings.

Interestingly, for Spanish consumers, product fit is more important than brand fit when buying HLCPS. Relatively, product fit for Taiwanese only impacts cognitive responses. On the other hand, brand fit is more important for Taiwanese than Spanish. Our results show that Spanish pay more attention on product fit and consider affective and cognitive responses at the same time, while Taiwanese consumers focus their attention on brand fit and cognitive responses. Further, it emerges that Eastern use more cognitive responses in their buying behavior. Overall, such results confirm the hypothesis that Spanish consumers are more individualistic than Taiwanese (Liñán and Chen, 2009).

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FIGURE 1
The conceptual model of this study

- Attitude toward Luxury brands
- Product Fit
- Brand Fit
- Attitudes toward the acceptance of High-tech Products
- Affective Responses
- Cognitive Responses
- Intention to buy
**TABLE 1**

Structural model results

<table>
<thead>
<tr>
<th>Proposed path</th>
<th>Spain COEF</th>
<th>p-value</th>
<th>Taiwan COEF</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hi-tech → Intention</td>
<td>0.02</td>
<td>0.666</td>
<td>-0.06</td>
<td>0.186</td>
</tr>
<tr>
<td>Luxury → Intention</td>
<td>0.09</td>
<td>0.038*</td>
<td>0.11</td>
<td>0.036*</td>
</tr>
<tr>
<td>Product fit → Intention</td>
<td>0.20</td>
<td>0.000*</td>
<td>0.06</td>
<td>0.553</td>
</tr>
<tr>
<td>Brand fit → Intention</td>
<td>0.03</td>
<td>0.651</td>
<td>0.20</td>
<td>0.025*</td>
</tr>
<tr>
<td>Product fit → Affective</td>
<td>0.16</td>
<td>0.006*</td>
<td>0.06</td>
<td>0.674</td>
</tr>
<tr>
<td>Product fit → Cognitive</td>
<td>0.20</td>
<td>0.001*</td>
<td>0.54</td>
<td>0.000*</td>
</tr>
<tr>
<td>Brand fit → Affective</td>
<td>0.08</td>
<td>0.152</td>
<td>0.08</td>
<td>0.347</td>
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<tr>
<td>Brand fit → Cognitive</td>
<td>0.16</td>
<td>0.011*</td>
<td>0.24</td>
<td>0.011*</td>
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<tr>
<td>Affective → Intention</td>
<td>0.24</td>
<td>0.000*</td>
<td>0.12</td>
<td>0.070**</td>
</tr>
<tr>
<td>Cognitive → Intention</td>
<td>0.31</td>
<td>0.000*</td>
<td>0.28</td>
<td>0.000*</td>
</tr>
<tr>
<td>Affective → Cognitive</td>
<td>0.24</td>
<td>0.002*</td>
<td>-0.09</td>
<td>0.687</td>
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<tr>
<td>Cognitive → Affective</td>
<td>-0.05</td>
<td>0.484</td>
<td>0.59</td>
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<tr>
<td>Hi-tech → Cognitive</td>
<td>-0.02</td>
<td>0.663</td>
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<td>0.008*</td>
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<tr>
<td>Cognitive → Intention</td>
<td>0.31</td>
<td>0.000*</td>
<td>0.28</td>
<td>0.000*</td>
</tr>
<tr>
<td>Luxury → Affective</td>
<td>0.53</td>
<td>0.000*</td>
<td>0.18</td>
<td>0.000*</td>
</tr>
<tr>
<td>Affective → Intention</td>
<td>0.24</td>
<td>0.000*</td>
<td>0.12</td>
<td>0.070**</td>
</tr>
</tbody>
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*P < 0.05; **P < 0.10.
<table>
<thead>
<tr>
<th>Items</th>
<th>Spain</th>
<th>Taiwan</th>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>LG (3 items)</td>
<td>5.79</td>
<td>1.01</td>
</tr>
<tr>
<td>Brand</td>
<td></td>
<td></td>
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<tr>
<td>Samsung (3 items)</td>
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<tr>
<td>Familiarity</td>
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<td>Prada (3 items)</td>
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<tr>
<td>Giorgio Armani (3 items)</td>
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<tr>
<td>Attitude toward luxury brands (8 items)</td>
<td>3.24</td>
<td>1.40</td>
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<tr>
<td>Product fit (3 items)</td>
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<td>Brand fit (3 items)</td>
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<tr>
<td>Attitude toward the acceptance of hi-tech products (8 items)</td>
<td>5.38</td>
<td>1.06</td>
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<tr>
<td>Affective responses (2 items)</td>
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<tr>
<td>Cognitive responses (2 items)</td>
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<td>1.29</td>
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<tr>
<td>Intention to buy (8 items)</td>
<td>2.73</td>
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