Oem's value through ingredient co-branding strategy: a case in the energy industry

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Abstract

***Purpose of the paper**: despite the increasing popularity of ingredient branding strategies, little is known about the industrial customers' perception of ingredient co-branding strategies in industrial contexts. The purpose of this study is to investigate this issue, which together with brand image and responsiveness can be considered antecedents of industrial customers' loyalty.*

***Methodology**: the results are drawn from an e-mail survey sent by the authors to a sample of Italian customers of a multinational ingredient supplier in the electric-energy industry. A factorial analysis and a linear regression are implemented to isolate the perceived co-branding value and to identify its impact on the customers' loyalty.*

***Findings**: the perceived co-branding value is a unique construct that - together with brand image and responsiveness - strongly predicts the loyalty for all of the ingredient supplier's customers.*

***Originality and limits**: this paper contributes to the understanding of the role of ingredient co-branding in the buyer-seller relationship in an industrial context. Nevertheless, the research presents some limits: it is conducted in one industry and in one country only. Thus, caution is required before generalizing the results.*

***Practical implications**: the findings suggest that co-branding strategies are effective in reinforcing buyer-seller relationships.*

Key words: ingredient co-branding, business-to-business markets, customer loyalty, co-branding value.

1. Introduction

The potential of strategic supply management to create superior value for supply chain members and their customers has been underlined by several studies (e.g. Golinelli, 2000; Presutti, 2003). In Supply Chain Management, value is not created in isolation by the single firm, but through cooperative interfirm ties. Therefore, it is essential to design the relationship among channel members in a way that enables

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sinergie, rivista di studi e ricerche
n. 89, Settembre-Dicembre 2012, pp. 35-49
ISSN 0393-5108

them to maximize the value they produce. Thus, supply chain members should cooperate to create value, while ex-post bargaining strengths determine the share of value appropriated by each participant (Iasevoli, 2004; Bertoli and Busacca, 2004; Vescovi and Cecchinato, 2005; Collesei and Cecchinato, 2007; Ghosh and John, 2009).

The ingredient co-branding strategy (as a specific case of business-to-business branding) is a cooperation strategy between suppliers and industrial customers that aims to create a higher value for both parties. More specifically, ingredient co-branding indicates the introduction and communication of branded components in products, machineries and equipments that alsocarry the Original Equipment Manufacturer's (OEM) brand name (Norris, 1993; Erevelles, *et al.*, 2008). It therefore implies "the creation of equity in an input brand usually through promotion" (Norris, 1993, p. 14) in order to increase the total value of the product in which the component is included. Bengtsson and Servais (2005) show that co-branding strategy is generally valuable in an industrial context, and, in particular, they demonstrate that co-branding strategy is an effective communication tool for industrial customers. However, no other paper investigates how co-branding partnership creates a superior value for the supplier and for the industrial purchaser.

In order to fill this gap, this research suggests that by including a branded ingredient in the OEM's product the total value of that product, as perceived by the OEM's customers, may be enhanced. To indicate this benefit, the paper introduces the concept of "perceived co-branding value", defining it as the OEM's perception that presenting an offer (i.e. machineries and equipment) together with branded ingredients and components determines a higher value for customers than presenting an offer under the OEM's brand alone. Following this reasoning, the research states that OEM's perception of a high co-branding value could motivate the OEM to be loyal to the ingredient supplier. In other words, this paper suggests that the branded ingredient could have an impact both on the OEM's attitudes and on its customers'.

The hypotheses are tested with data collected from industrial customers (OEMs) of a European multinational energy company that operates in more than 100 countries and owns more than 2000 corporate branded products. Given the exploratory aim of this paper, the analysis focused on the Italian market. The company provided a customer database of 700 Italian decision-makers who were contacted by mail and asked to answer an online questionnaire. Established scales for "perceived seller's brand image" (Davis *et al.*,, 2008), "perceived seller's responsiveness" (Davis *et al.*, 2008) and "brand loyalty" (Roberts and Merrilees, 2007) are used and adapted for this study. The construct "perceived co-branding value" is a new concept created and introduced for this research. Each construct was measured using multiple items and each of them was evaluated on a 7 -point Likert scale. A linear regression analysis was employed to verify if the industrial customers' perceived co-branding value, brand image and responsiveness can indicate their loyalty to the supplier's brand.

2. Literature review

The relationship between supply chain members has been explained by several theoretical perspectives, such as the agency theory (Eisenhardt, 1989), relational contracting and trust development (Macneil, 1980; Rousseau *et al.*, 1998; Busacca and Castaldo, 2002) and power-dependence relations (Emerson, 1962).

This last theoretical approach suggests that power (which is the opposite of the dependece concept) may be distributed among the dyad supplier-buyer in different ways (Emerson, 1962). In this context, channel member power is defined as "(his) ability to control decision variables in the marketing strategy of another member in the channel operating at another level" (El-Ansary and Stern, 1972, p.47). This means that the supplier will hold most of the power if some of his actions (e.g. selling a particular product to the buyer) are determinant for the success of the buyer, and vice versa (Varaldo and Dalli, 2011).

The transaction cost perspective clarifies some suitable sources of power unbalance. This theory states that the degree to which durable transaction-specific investments are incurred determines the power (un)balance (Williamson, 1979). Asset specificity (site specificity, physical asset specificity, human asset specificity, dedicated assets) is the degree to which an asset can be redeployed to alternative uses without sacrifice of productive value (Williamson, 1979; Van de Ven, 1976). If only one of the two parties involved (buyer and seller) has incurred in such costs, then this party will be dependent on the other.

The actor who holds the power can apply it through two different influence strategies (Kim, 2000): coercitive influence strategies and noncoercitive influence strategies. In the first case, the strongest company puts pressures on the partner to perform a specific behavior by stressing the negative consequences in case of noncompliance. In the second casethe strongest firm applies no or little direct pressure on the partner, focusing instead on influencing its attitudes and beliefs. At the same time, in his research Kim (2000) demonstrates that the presence of trust between buyer and seller discourages the use of coercive influence strategies, regardless of the (a)simmetry of power.

Hausman and Stock (2003) and Simpson and Mayo (1997) demonstrate the negative impacts of coercive influence on relational elements (commitment and trust) in B2B markets. In the same research stream, Hausman and Johnston (2010) assert that non-coercitive strategies have a positive impact on trust and commitment; this, in turns affects buyer's compliance and jointed actions. Therefore, finding and creating non-coercitive influence strategies is essential to create strong and long-term relationships among industrial actors.

Following the power-dependence theoretical framework, one relevant issue is to investigate suitable power-balancing tecniques (Emerson, 1962; Busacca and Castaldo, 2002). The purpose of this paper is to study whether the ingredient co-branding strategy can become one of such tecniques. More specifically, the author analyses whether, by branding its ingredient (or component), a supplier can increase its power towards the ingredient buyers' capturing their loyalty in a non coercive way.

Therefore, this paper is the first attempt to demonstrate how a co-branding strategy and its communication can provide value and reinforce the relations between manufacturers and OEMs (loyalty) in an industrial market. The author demonstrates that a co-branding strategy in a B2B context can lead to a higher level of perceived value by OEMs' customers and consequently a higher level of fidelity by the OEMs themselves. The ingrediend co-branding strategy is therefore a non coercive influence strategy that favors the creation of a long-term relationship (fidelity) in a B2B context.

As mentioned before, the ingredient co-branding strategy is a specific case of business-to-business branding. It indicates the introduction and communication of branded components in products, machineries and equipment that also carry the Original Equipment Manufacturer's (OEM) brand (Norris, 1993; Erevelles *et al.*, 2008).

The studies on ingredient co-branding strategy consider it as targeted to final customers (Bertoli and Busacca, 2004; Iasevoli, 2004; Vescovi and Cecchinato, 2005; Collesei and Cecchinato, 2007), i.e., they are interested in understanding whether branded ingredients - e.g., Lycra in man-made fibers - are able to differentiate identical industrial products from the final-customer point of view (e.g. Saunders and Watt, 1979). Researches on co-branding strategies in business-to-consumer markets demonstrate (Besharat, 2010) that the effectiveness of this strategy depends on the length of the agreement and/or cooperation between the involved companies, on the fit between the involved brands and on the equity of both brands. In particular, co-branding strategies in business-to-consumer industries have better effects when they are based on a long-term agreement between the involved companies, the brands share a certain level of fit (brands should have a logical connection), and high-equity brands are involved.

Despite the researches in business-to-consumer markets, the potential impact of ingredient co-branding strategies on industrial buyer-seller relationships and its power balance effect are overlooked. The branded ingredient could provide value for the OEM's offer and thus influence its loyalty (and level of dependence) toward the supplier of the component. Similarly, as regards co-branding in general in business-to-business markets, Bengtsson and Servais (2005) contend that this strategy is generally effective also in an industrial context. In particular, they show that co-branding for two different products that are often used together communicates to the purchaser that the two products are compatible.

In the specific case of the ingredient co-branding strategy in business-to-business markets both the ingredient supplier and the manufacturer benefit from cooperation, due to (Erevelles *et al.*, 2008):

- relationship benefit, deriving from mutual co-operation and risk sharing;
- competitive benefit, related to the reduced possibility of new competitors' entrance;
- cost benefit, because of economies of scale and long-term relationships;
- double marginalization benefits, allowing lower prices;

- advertising support benefits, due to promotional co-operation between supplier and seller.

In particular, for what concerns the benefits for the buyer, this paper suggests that including a branded ingredient in a product may increase its total value. Following the measurement of "co-branding value" in business-to-business markets by Ghosh and John (2009), the author introduces the concept of "perceived co-branding value" to indicate OEM's perception that the branded components increase the value of their machineries and products for their clients. In addition, the author states that OEM's perception of a high co-branding value could motivate the OEM to be loyal to the ingredient supplier.

3. Research model

Even though the ingredient co-branding issue has been largely underresearched, the business-to-business branding area in general has been recently receiving increasing attention (Cretu and Brodie, 2007) due to the increasing competition and the process of commoditization in many industrial markets (Van Riel *et al.*, 2005).

In particular, industrial marketing researchers have analyzed many aspects of business-to-business branding: the antecedents of brand equity (e.g., Rauyruen, *et al.*, 2009), the relation between the buying process and the impact of branding (e.g. Alexander *et al.*, 2009), business-to-business brand communication (Bendixen *et al.* 2004) and industrial brand extension (Tang *et al.*, 2008). In each of these works, customer loyalty is assesssed as one of the major elements for measuring the success of branding strategies.

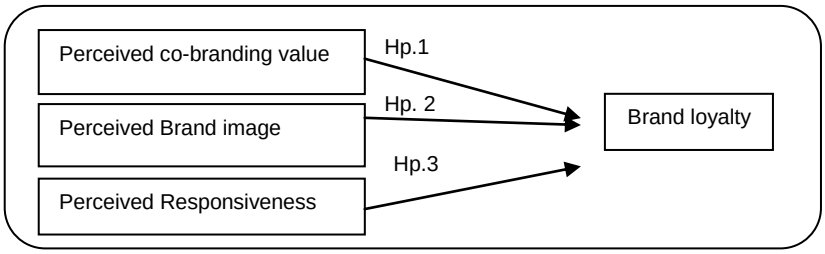
In this regard, many authors consider customer loyalty as one of the main components of strategic marketing (Valdani and Ancarani, 2009), and brand loyalty is one of the most studied issues (Jacoby and Chestnut, 1978; Quester and Lim, 2003). In particular, Jacoby and Chestnut (1978) define brand loyalty as a "biased behavioral response expressed over time by some decision-making unit with respect to one or more brands out of a set of such brands, and [as] a function of psychological processes"(1978, p. 2).

There are many ways for measuring brand loyalty (Baldinger and Rubinson, 1996; Dick and Basu, 1994; Chaudhuri and Holbrook, 2001); however, brand loyalty measurements usually include customer behavior, an assessment of performance, customer's satisfaction and empathy with the brand (Aaker, 1992). Also business-to-business branding literature has explored many antecedents of loyalty to the supplier's brand. This stream of research has found several significant drivers of loyalty (Rauyruen *et al.*, 2009, p. 181), such as brand attitude (Taylor and Hunter, 2003), brand equity (Van Riel *et al.*, 2005) and brand reputation (Cretu and Brodie, 2007). In particular, when a buyer evaluates competing offers, tangible and intangible attributes are compared (Mudambi *et al.*, 1997). Price and tangible attributes cannot always fully explain purchasing decisions (Mudambi *et al.*, 1997; Han and Sung, 2008), and intangible factors included in brands do matter as well

(Mudambi, 2002). Alexander *et al.* (2009), for example, isolate the effects of brand and of tangible factors (i.e. durability, lead time, technical support and price) on purchasing decisions of buying centers.

Drawing on this literature, the author suggests that both tangible and intangible factors may have a similar impact on buyers' loyalty as well. More interestingly, in the case of industrial branding strategies the perceived co-branding value may be another intangible antecedent of buyers' loyalty. Therefore, the research model depicted in figure 1 includes both intangible (perceived brand image and perceived co-branding value) and tangible drivers (perceived responsiveness) of loyalty.

Fig. 1: The research model



Source: author's elaboration

Available studies on business-to-business branding demonstrate that "branding is not equally important to all companies, all customers, or in all purchase situations" (Mudambi, 2002, p. 531). Some studies explore the market and target conditions that can increase or decrease the effects of industrial branding (e.g., Mudambi, 2002). Similarly, in the present paper the author suggests that the impact of the perceived co-branding value may be contingent on some specific factors. In particular, in the case of "perceived co-branding value" the fit between the involved brands is a relevant issue (Ghosh and John, 2009; Besharat, 2010). The fit between two brands can be evaluated at product level (product fit) or at image level (brand fit). Product fit occurs when the two co-branding goods are perceived as sharing similar physical attributes (Besharat, 2010). Brand fit arises when there is a high degree of consistency between the images of the participating brands. This evaluation affects co-branding value perception. According to Ghosh and John (2009), a high level of fit is necessary for the co-branding strategy to be successful.

In this paper, "perceived co-branding value" is defined as the OEM's perception about the potential value enhancement of its offer,. Thus, the author suggests that this construct implicitly includes OEM's rational about the fit between the involved brands. In particular, if the OEM perceives a high co-branding value, this means that the two brands are perceived as having a high degree of fit and consistency, and vice versa.

Moreover, Ghosh and John (2009) argue that an OEM selects a branded component contract (instead of a white contract) when the branded component can

improve customers' perceptions about the OEM's product. Following this statement, this paper suggests that OEM's perception of a high co-branding value is related to its customers' assessment of the higher quality of the proposed machinery or industrial products. This belief could motivate the OEMs to be loyal to the ingredient supplier, as they perceive a higher value for their clients. In other terms the author suggests that the branded ingredient could have a positive impact both on the OEM's attitudes and on its customers' perceptions. Therefore, the first hypothesis of the proposed theoretical model states that:

H 1: the perceived co-branding value significantly predicts the buyer's brand loyalty.

According to the stream of research about business-to-business branding (e.g., Van Riel *et al.*, 2005; Cretu and Brodie, 2007; Rauyruen *et al.*, 2009), OEM's loyalty to the ingredient's supplier can be defined as the willingness of the buyer to continue the relationship with the seller in the future (Roberts and Merrilees, 2007). This stream of research depicts several significant drivers of loyalty (Rauyruen *et al.*, 2009, p. 181), such as brand attitude (Taylor and Hunter, 2003), brand equity (Van Riel *et al.*, 2005) and brand reputation (Cretu and Brodie, 2007). In particular, during the evaluation process buyers weigh competing offerings according to tangible and intangible attributes (Mudambi *et al.*, 1997).

In this context, price and tangible attributes cannot always fully explain purchasing decisions (Mudambi *et al.* 1997; Han and Sung, 2008); thus also intangible elements included in brands can become discriminant variables among offerings (Mudambi, 2002). Alexander *et al.* (2009), for example, isolate the effects of brand and of tangible factors (i.e. durability, lead time, technical support and price) on purchasing decisions of buying centers. Therefore in present literature the impact of the B2B brand on the industrial buyer's loyalty has already been assessed and measured. Drawing on these results, the author states that the OEM's loyalty to the ingredient supplier brand is dependent also on the OEM's perception about the supplier's brand image in general. Therefore, the second hypothesis of this paper states that:

H 2: the perceived supplier's brand image significantly predicts the OEM's loyalty to supplier's brand.

As mentioned before, OEM's loyalty to the ingredient supplier's brand is not only dependent on intangible aspects such as perceived co-branding value and supplier's brand image, but also on tangible elements (Han and Sung, 2008). Roberts and Merrilees (2007) state that responsiveness is one of the tangible elements that can predict industrial customers' loyalty. Specifically, responsiveness reflects the way the supplier responds to issues, provides information, consults and seeks feedback on issues, and the timeliness and relevancy of the information provided.

In particular, responsiveness registers the day-by-day operational and the tangible interactions between the OEM and the supplier. In the present paper, the proposed theoretical model includes such day-by-day responsiveness as well as the support provided by the ingredient supplier to the OEM as an antecedent of loyalty. As a consequence, the third hypothesis states that:

H 3: the perceived supplier's responsiveness significantly predicts the OEM's loyalty to supplier's brand.

4. Research design

The hypotheses have been tested with the data collected from industrial customers (OEMs) of a European multinational energy company that operates in more than 100 countries, and owns more than 2,000 corporate branded products. Given the experimental aim of this paper, the analysis focused on the Italian market. The company provided a customer database of 700 Italian decision-makers who were contacted by mail and asked to answer an online questionnaire. 139 of them participated, resulting in a response rate of 19.8%, which is acceptable for B2B market. After eliminating 15 incomplete questionnaires, there were 124 usable answers.

94.4% of the surveyed companies (n=124) have their headquarters in Italy, but 78.2% of them export their industrial products and services all over the world. 59.7% of the sample produces industrial plants or infrastructures, 16.9% provides energy services (energy converting and installations), 12.9% works in the electronic sector and 10.5% in automation. Thus, the sample represents all categories of buyers' in the energy business. Moreover, 36.3% of the respondents work in a technical office, 19.4% in a purchase department and 6.5% in an administrative office; moreover, 25% of them are owners or executives and 12.9% are project managers.

Established scales for "perceived seller's brand image" (Davis *et al.*, 2008), "perceived seller's responsiveness" and "brand loyalty" (Roberts and Merrilees, 2007) were used and adapted for this study. The construct "perceived co-branding value" resulted from the adaptation of the "differentiation capability" construct, used by Ghosh and John (2009): an item regarding internal design and engineering synergies was dropped and substituted with a new item since our purpose was to investigate the value generated for the market (and not the internal value). The other items were adapted to this research.

Each construct was measured using multiple items and each of them was evaluated on a 7 -point Likert scale. The author tested the validity and reliability of the construct and its measurements through a preliminary questionnaire submitted to ten master students of our University who worked in the energy industry and had roles similar to those of our potential respondents (Churchill, 1979). This test permitted to refine some questions, in order to make them clearer and to delete

inconsistent questions (two overall items) or redundant ones (providing perceived brand image and responsiveness).

Finally, the author submitted the questionnaire to the marketing managers of the energy company for a last review and minor enhances were introduced in the final version.

In particular, following Roberts and Merrilees (2007)'s concept of OEMs' perceived responsiveness, during the pre-test the author identified seven items concerning the OEMs' perceived responsiveness towards the supplier of components: responsiveness to OEM's emerging problems and their needs, easiness to work with the supplier, provision with timely and appropriate information, management skills, disclosing of confidential information, and interaction with the supplier during the OEM's strategy creation process. During the reliability analysis, these last two items were deleted because of a low item-to-total correlation (0.37 and 0.42).

The final OEMs' perceived responsiveness includes five items and shows a high internal consistency (α=0.917 and item-to-total correlation larger than 0.703). According to Davis *et al.* (2008), the perceived brand image was measured by means of five 7-point Likert-type items representing OEM's perception of: competitive differentiation of the supplier, prediction of supplier's performance, supplier's reputation in the market, suppliers' quality of buying process and supplier's attention to business partners.

The reliability analysis supported the internal consistency of this measurement scale (α=0.80 and r=0.601). Following Ghosh and John (2009), the author measured OEM's perceived co-branding value by means of four 7-point Likert-type items representing the OEM's perception that the branded components increase the value of their machineries and products for their clients.

Conbrach's Alpha indicated that the perceived co-branding value measurement scale was internally consistent (α=0.881 and r=0.572). For what concerns brand loyalty measurement (Roberts and Merrilees, 2007), four items were used to describe the intention to purchase the producers' components in the long run. Conbrach's Alpha showed that the brand loyalty measurement was internally consistent (α=0.943 and r=0.803).

In addition, the author used oneway ANOVA to compare the means of the factor-scores of all constructs within the role and industry categories. Moreover, the Kolmogorov-Smirnov (K-S) test examined whether the sample distribution of the categories were equal (Boes *et al.*, 1974). The p-value for each factor was insignificant $p \geq 0.50$ for each category. Hence, the role of the respondents, the industry of provenience and the exported markets did not cause any survey biases.

4.1 Analysis and results

Distributions of all the variables have been tested for normality and several factor analysis were implemented to decrease the number of variables. Criteria such as Eigen Value (≥1), factor loading, (≥.45) and KMO measure of sampling adequacy

and Bartlett's test of sphericity were used to derive four components accounting for a total of the explained variance of 66.02%.

Moreover, a single factor analysis on the dependent variable was also conducted in order to obtain a single factor score used to regress the construct.

OEM's loyalty to the ingredient supplier's brand represents the intention to purchase the producers' components in the long run. The results of factor analyses (Conbrach's Alpha, Eigen Value, standard loading, mean and standard deviation) are summarized in Table 1.

A linear regression analysis was employed in order to determine the extent to which perceived co-branding value, brand image and responsiveness predicted brand loyalty.

Before running this analysis, all the cited factors were screened for multicollinearity. The diagnostic results did not show multicollinearity between the variables (VIF<1.01), and the correlation results are depicted in Table 2.

Then, the author examined the underlying assumptions of regression analysis - normal linearity and homoscedasticity - through the analysis of the normal probability plot of residuals and of the plots of the residuals against the predicted values.

Table 1: Composition of measures and item descriptive statistics

Factor Item Conbrach Alpha; EigenValue; variance explained	Std. Loading	Mean	S.D
Perceived Responsiveness (α=0.917; EV=7.026; VAR 46.93%)			
The company is responsive to emerging problems	0.91	4.89	1.31
The company responds quickly to our needs	0.87	5.00	1.36
Working with the company is easy	0.77	4.98	1.28
The company keeps us informed with timely and appropriate information	0.56	5.27	1.26
The company management is skilled at working with us to solve problems	0.57	5.16	1.22
Perceived Co-branding Value (α=0.881; EV=1.931; VAR 12.00%)			
Our brand can benefit from being associated with the company's brand	0.88	4.63	1.66
Working with the company creates value to our brand	0.84	4.76	1.64
Our customers appreciate that our machineries/product portfolios contain company's products	0.78	4.70	1.59
If we didn't use the company brand in our products, we would lose competitiveness	0.58	2.94	1.57
Perceived Brand Image (α=0.870; EV=1.253; VAR 7.07%)			
The company has a good reputation among B2B operators	0.78	5.78	1.09
In general the quality of the buying process is excellent	0.73	5.31	1.05
In comparison to other companies in the same industry, the company is highly respected	0.64	5.38	1.24
We can predict how the company will perform	0.59	5.14	1.13
The company is known as a company that takes good care of their business partners	0.58	5.11	1.12
Brand Loyalty (α=0.93; EV=3.44; VAR 82%)			
We are keen to continue our collaboration with the company	0.92	5.49	1.18
It is likely that we will continue our collaboration with the company	0.91	5.56	1.22
We wish to work with the company as long as possible	0.77	5.44	1.21
We have no doubts whatsoever about continuing working with the company	0.67	5.09	1.45

Source: author's elaboration

Table 2: Correlation between perceived co-brand value, perceived brand image, perceived responsiveness and brand loyalty

Pearson Correlations				
	Brand Loyalty	Perceived Co-branding Value	Perceived Brand Image	Perceived Responsiveness
Brand Loyalty	1			
Perceived Co-branding Value	0.452**	1		
Perceived Brand Image	0.481**	0.084	1	
Perceived Responsiveness	0.454**	0.003	0.066	1

**p-value<0.01

Source: author's elaboration

The results of the regression analysis are illustrated in Table 3, which shows the standardized regression coefficients (B), the standard errors and VIFs. As a result, R is significantly different from zero. The results showed that these three variables - perceived co-brand value, brand image, responsiveness - accounted for 58.2% of the variance in OEM's loyalty to the ingredient supplier's brand.

These findings support all the three hypotheses about the impact of the perceived co-branding value (H1), seller's brand image (H2) and seller's responsiveness (H3) on OEM's loyalty toward the supplier of the branded component. In particular, the findings demonstrate that intangible factors significantly affect the loyalty of industrial buyers as well.

Table 3: Regression of perceived co-brand value, perceived brand image and perceived responsiveness on brand loyalty

	Standardized Coefficients	Standard Error	VIF	Hypothesis Check
	Beta			
Perceived Co-branding Value	0.415**	0.063	1.007	H1 supported
Perceived Brand Image	0.419**	0.067	1.004	H2 supported
Perceived Responsiveness	0.426**	0.062	1.011	H3 supported
R2 = 0.763; R = 0.582*				

**p<.01

Source: author's elaboration

More interestingly, this analysis isolates the role of the co-branding value as an antecedent of B2B brand loyalty. In other terms, when an OEM perceives that including branded components in its products improves the attitude of its clients, it is more likely to be loyal to the ingredients' supplier.

5. Limitations and conclusion

The results of this paper contribute to understanding the impact of ingredient co-branding strategies on buyer-seller relationships, demonstrating that the industrial buyer is more likely to be loyal to the component's supplier when he perceives a high co-branding value. This implies that by applying a successful ingredient co-branding strategy, suppliers and customers can enhance the co-produced value. Moreover, the supplier of the component can act on the power-dependence relation with its industrial buyers in a cooperative way (Emerson, 1962; Varaldo and Dalli, 2011). Therefore, co-branding can be enrolled among the non-coercitive influence strategies and it is essential for creating commitment and trust between industrial suppliers and buyers and consequently for strong and long-term relationships.

Finally, this study also gives further support to the role of business-to-business branding and of intangible factors in determining the dynamics of industrial relations.

Ingredient co-branding choice can therefore have a double impact:

- it can increase the overall value of the final co-branding offering and therefore provide a higher benefit both for the OEM and for the seller of the component as demonstrated by Erevelles *et al.* (2008);
- it can modify the contractual power and benefits appropriation between the buyer (OEM) and seller, which is one of the important implications enlightened by our analysis.

Moreover, this study also gives further support to the role of business-to-business branding and of intangible factors in determining the dynamics of industrial relations. In particular, this paper demonstrates that industrial branding impacts can derive both from brand image and from the perceived co-branding value.

As concerns the managerial implications for ingredient suppliers, branding a component to be sold to industrial customers (OEM) can help suppliers differentiate themselves from other competitors and capture the OEM's loyalty. Moreover, this strategy cancontribute to reduce the risk of commoditization of the component and to partially isolate the supplier from increasing competition. Besides, while in this study the supplier of the ingredient was a multinational energy company, it may be hypothesized that ingredient branding could be an appropriate strategy also for small and medium companies willing to introduce innovative components on the market. Branding their components may allow them to increase their competitive power on the industrial markets for their ingredient, despite their small size.

As for the OEM, including a branded component in its industrial products can increase the value of its offerings for its customers, with the correlated opportunity of selling these products at higher margins. In particular, the OEM could decide to enter an ingredient co-branding agreement with a supplier of a very specialized and innovative ingredient, which could add new strong brand associations to the OEM's brand.

Hence, in general, ingredient co-branding appears to be a win-win strategy that may be applied to a wide range of industrial products.

In interpreting the findings of this study, several limitations have to be considered as well. The first limitation lies in the sampling, which comes from only one company and one country. Another limitation is linked to the limited number of factors included in this study; since a long and elaborate questionnaire would not be welcomed, brand loyalty was measured only through one factor.

Moreover, research about business-to-business branding is highly related to the specific research setting (in this case, the industry for energy components and equipments). Therefore, caution is required when extending findings to other industries and business-to-business markets.

From these limitations several streams for further research emerge. It may be interesting to replicate the study within different industrial sectors and countries. It may be interesting also to test the same model in case of multiple branded components in the same machinery or equipment. The model could also be completed by adding other factors able to describe the relational dynamics between buyer and seller.

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