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Strategic Coopetition of Global Brands: A Game Theory Approach to 'Nike + iPod Sport Kit' Co-branding

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Co-branding can be implemented by establishing an agreement of strategic coopetition that allows companies to compete and cooperate simultaneously in order to obtain competitive advantages through operational synergy. With this type of agreement, brands enter markets sharing loyal customers they would be unlikely to reach individually. The main advantages associated with implementation of this form of strategic coopetition are the possibility of jointly communicating brand image, reputation and credibility in a global market where consumers tend to have homogeneous preferences and convergent lifestyles. The strategic coopetition between two global brands, *Apple* and *Nike*, through development of the '*Nike+iPod Sport Kit*' product, serves as a benchmark to illustrate the benefits associated with implementation of coopetitive cooperation agreements. From application of the game theory, simulation of a game of strategic coopetition provided results that confirm global brands obtain benefits, albeit not in equal measure, in terms of adding value to the brand image at a world level.

Keywords: Co-branding, Coopetition, Global brands, Growth of brand value.

1. Introduction

Markets are more and more competitive, and for this reason strategic coopetition between companies emerges as a means for strategic partners to obtain benefits. In situations characterized by a sharp slowing down of the economy, where the main priority is to minimize costs so as to obtain greater operational efficiency, cooperating in order to compete is an increasingly fundamental marketing strategy to face more efficiently the challenge of implementing a brand with global characteristics.

The brand is an intangible asset that has taken on importance in strategic terms, for both public and private companies. A prestigious brand image gives the company a competitive advantage, since it allows consumers to perceive enjoying greater benefit associated with the characteristics and quality of the product or service. The influence of the brand is based on the existence of confidence and a set of expectations. Co-branding is based on association between two recognized brands to develop a product with high added value. In this way, co-branding allows transfer of reputation and credibility between partner brands, making the marketing process more efficient.

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This study carries out a review of the literature on typologies of strategic cooperation and coopetition, putting particular emphasis on the importance of co-branding as a mechanism for strengthening the image of global brands. The case study referring to the global brands of *Apple* and *Nike*, which are among the 40 biggest world brands[2], is justified by the fact of providing analysis of the benefits arising from establishing an alliance of strategic cooperation of co-branding between two global brands, namely through added benefits for the purpose of giving increased value to brand image.

The central question directing the analysis carried out in this paper can be stated as follows: how are the generated benefits shared when an alliance of strategic cooperation of co-branding is established between two global brands?

To this end, we measure the brand value associated with implementation of the co-branding alliance, through a game theory application.

This study contributes to the literature on strategic coopetition, providing greater understanding of the strategy of co-branding between global brands, as well as of the mechanisms for sharing the benefits obtained by global brands, in terms of brand image value.

This study is structured as follows. The first section makes a review of the literature on strategic cooperation and its importance for companies, ways of cooperating and identification of the advantages and disadvantages associated with its implementation. The second section presents the concepts of global brands and strategic co-branding cooperation. Then, we present the case study applied to co-branding of the global brands of *Apple* and *Nike*. An application of game theory is used, considering a scenario of a cooperative game, with perfect information. Finally, we present and discuss the results as well as implications and suggestions for future investigation.

2. Literature review

2.1. Strategic cooperation and coopetition

The twenty-first century has been marked by the paradigm of collaborative cooperation. Cooperation between organizations, for profit or not, has been growing and gaining importance in strategic terms. Joint action is a form of intelligent action to attain strategic objectives (Austin 2000).

Therefore, for Osorio *et al.* (2002) a strategic alliance includes not only the formation of agreements for sharing of resources, investigation and technology but also the formation of strategic agreements that allow cooperation and competition simultaneously.

Klotzle (2002) considers that increased competitiveness (i.e. the ability to compete) is a question of survival for companies, whatever the economic activity they carry out. Therefore, sometimes it is quite an onerous task for companies to find the capacity for an efficient value chain, which makes actions of collaborative cooperation with other companies take on critical importance in determining their pro-cooperative strategic orientation, in a coopetitive way, i.e. cooperating and competing simultaneously.

Cooperation between organizations covers all strategic decisions adopted by two or more independent organizations among which there is no relationship of subordination. Therefore, organizations partially unite or share their capacities and resources, without

[2] According to the data made available by the English consultants *Interbrand* (http://www.interbrand.com/).

embarking on a merger and acquisition (M&A) process, so as to reach a previously defined objective, based on inter-dependent negotiation (Franco 2001).

Brandenburger & Nabeluff (1996) define coopetition as the combination of forms of cooperation and competition between companies. Companies that establish cooperative unions manage to achieve mutual gains and competitive advantages. In this way, the success of the cooperation lies in the balance between competition and cooperation (Porter 1998; O'Connell 2001).

Coopetition can also be approached as a form of simultaneous cooperation and competition. Coopetition implies share of knowledge that can be a source of competitive advantage. Knowledge gained or released in the cooperation can also be used to compete (Osorio *et al.* 2002; Levy *et al.* 2003).

For Lynch (1993), establishing alliances between companies is only justified if they result in obtaining advantages. The same author identifies a set of advantages achieved through cooperation alliances, namely (i) synergy from combined resources; (ii) increased speed of operations; (iii) shared risk; (iv) technology transfer; and (v) eliminating struggles between competitors.

Sherman (1999) and Leitão (2008) consider that despite the existence of various disadvantages arising from cooperation relationships, these are compensated for by obtaining various strategic benefits, such as development of new markets (national or international), joint research and development (R&D) efforts, development of shared technology, combination of complementary resources, acquisition of capital, and access to new channels, networks, specific resources or marketing competences.

Lynch (1993) and Sherman (1999) identify different advantages associated with strategic cooperation, with great convergence concerning shared risk, cost reduction and obtaining synergy. However, Franco (2001) mentions that cooperation can face obstacles related to the need for constant coordination between companies, the possibility of some skills and specific resources being acquired by other companies involved in the agreement, the possible risk of conflict created by different cultures between the parts and the relative loss of autonomy.

In the same line of thought, Lynch (1993) warns of various disadvantages arising from the formation of cooperation agreements. He identifies essentially problems in control, establishing rules for decision-taking, competition between the parts, insoluble risks, strategic shifts and operational effectiveness. Although alliances aim to reduce risks, the very formation of a cooperation alliance includes a risk associated with the possible occurrence of industrial espionage. Operational effectiveness in this type of alliance is highly questionable, due to the difficulties associated with the choice of reliable partners. For the purpose of guidelines and framework of this study, we now make a review of the literature on the main forms of strategic cooperation and their respective functions (see Table 1 presented below).

Table 1 – Strategic Cooperation: Forms and Functions

Forms	Authors	Function
Franchising	Brito (1993), Farhanjmehr & Eiriz (1997), Franco (2001) and Sanchez (2005)	Granting the right to use an established brand and everything associated with this in exchange for financial remuneration (royalties).
Licensing	Brito (1993), Farhanjmehr & Eiriz (1997), Sherman (1999), Franco (2001) and Sanchez (2005)	Authorizing the production and/or commercialization of goods or services to third parties, in exchange for financial remuneration.
Outsourcing	Brito (1993), Farhanjmehr & Eiriz (1997), Franco (2001) and Sanchez (2005)	Ordering certain services, finished products or product parts from specialized third parties.
Joint Venture	Brito (1993), Farhanjmehr & Eiriz (1997), Sherman (1999), Franco (2001) and Sanchez (2005)	Creation of a legally independent entity through balanced share of investment, profits and risks by two parties.
Consortium	Brito (1993), Farhanjmehr & Eiriz (1997) and Franco (2001)	Establishing partnerships between companies in the development of a common large-scale project.
Co-branding	Sherman (1999)	Association of two well-known brands in the creation of a new product or service.

Source: Own elaboration.

2.2. Global brands

The *American Marketing Association* (AMA 1960) proposed the following definition of a brand: «a name, term, sign, symbol, or design, or a combination of them which is intended to identify the goods or services of one seller or a group of sellers and to differentiate them from those of competitors». A brand adds intangible dimensions to a product or service, contributing to its differentiation.

According to Weilbacher (1994), the brand is the cornerstone of marketing, because it is what provides recognition of a product or service by the customer. The brand name is a way of guaranteeing the lasting character and specifications of a product or service in the process of repeat purchase. Therefore, the brand provides the means to supply customers with intrinsic value, and the illusion of enjoyment or ostentation of that value.

For Nilson (1998) and Hanby (1999), the brand is only a symbol, but with great potential. Branding corresponds to the whole process of building up the brand, communication of the reliability and reputation of products and/or services. Therefore, for Levitt (1980), Aaker (1997) and Keller (1998), customers do not usually form a relationship with the product or service, but rather with the representative brand. However, Gelder (2003) considers that brands aim to persuade the customer, so as to guarantee that companies reach their objectives.

Weilbacher (1994) and Keller (1998) claim that brands should transmit confidence, consistency and above all influence customer expectations (or levels of aspiration).

Since the application presented deals with a case of strategic coopetition between two global brands, *Apple* and *Nike*, it is pertinent to show the importance of global brands in the context of a globalized market with a tendency towards universal homogenization of consumer preferences.

In the view of Levitt (1983), the world can be considered as a common market where consumers are more cosmopolitan and have convergent lifestyles. Consumers, wherever they live, want what they have seen, have heard about or have tried out via information and communication technology (ICT) in any part of the world.

For Cayla & Arnould (2008), there is a group of universal understandings, for example concerning the relationships between individuals and society, although the former show a prominence of values associated with the Western view. Therefore, from the perspective of Hollensen (2007), the basic understandings to respect are: language; behaviour and customs; technology and material culture; social institutions; education; values and attitudes; aesthetics; and religion.

According to Kotler & Keller (2006), the development of the World Wide Web, rapid access worldwide to cable and satellite television, and global interconnection of telecommunication networks contributed to convergent lifestyles and consequently greater homogenization of consumers' needs and preferences.

For Craig & Douglas (2000), the emergence of global brands is justified for the following reasons: (i) improved standard of living (consumers can afford a wider range of products); (ii) greater mobility (consumers travel more and more and are exposed to different products in different countries, emigration also playing an important role when consumers look for familiar brands in the new country); (iii) globalization of mass media (global display of advertising, films and television programmes contributes to the creation of lifestyles and products that go beyond a single culture); (iv) greater pro-efficiency pressure (companies concentrate on using identical forms of communication worldwide with globally established images, in order to reduce costs); and (v) changes in power relationships (manufacturers are increasingly dependent on retailers that have their own brands, which in turn forces manufacturers to keep distribution of their products based on globally recognized brands).

According to Özsomer & Altares (2008), the '*Global Brand*' concept can be better understood by considering two perspectives. The first based on standardization of brand marketing and the second based on perception and recognition of the brand by the consumer.

Aaker & Joachimsthaler (1999) define global brands as having a high degree of similarity from one country to another in terms of identity, position, advertising strategy, personality, product, packaging and image.

Levitt (1983) and Kotler & Keller (2006) consider that a programme of global branding can diminish marketing costs, allowing economies of scale in production and providing a source of long-term growth.

However, as global brands typically have greater implantation in terms of geographical penetration and spread than local or domestic brands, these are perceived by consumers as being stronger and more powerful (Steenkamp *et al.* 2003). For that reason, consumers, despite considering global brands as widely recognized, available and standardized in all markets, confuse globalism with brand strength and power. In fact, it is stated that brand power and strength are perceived by the consumer as signalling mechanisms of superior quality (Dimofte *et al.* 2008).

With market globalization, global brands have been promoted to eternal protagonists, exercising their power and influence in various domains. In economic terms, consumers are willing to pay higher prices set by manufacturers. In the psychological domain, global brands contribute to creation and communication of an identity, a sense of fulfilment and identification, which as a rule symbolizes a set of values that aspire to be an integral part of a global culture (McCraken 1986).

Global brands convey values defended by a global culture and consumers actively create and add meanings or typified identities to these brands (Özsomer & Altares 2008).

The brand is a competitive advantage in an increasingly global market. For that reason, there is a need to study and try to measure the value of brands, particularly global ones.

In the studies about measuring brand value, developed by *AC Nielsen* and *Interbrand*, objective measures are used, including the current reach of brands in all markets, the percentage of sales in external markets and the minimum return generated at a global level, to assess and attribute the status of global brand (Özsomer & Altares 2008).

Interbrand draws up an annual list of the 100 global brands with the greatest value worldwide - *The Best Global Brands*[3]. The criteria used by *Interbrand* to attribute the status of global brand are the following: (i) financial information publicly available, (ii) percentage of sales in external markets of at least 33.3%; (iii) general recognition by consumers, (iv) positive added value, in economic terms; and (v) non-exclusive character of the *B2B* (*Business to Business*) market.

2.3. Co-branding

2.3.1. Definitions

According to Gopalakrishnan (2007), strategic cooperation of co-branding results in joint brand leveraging, through positive association with a partner's brand image, so as to build and maintain competitive advantage. For Beezy (2007), co-branding corresponds to the union of two or more products of different brands which originates a new (separate and unique) product or a joint brand.

According to Srinivasan (2007), co-branding is the marriage between two brands with different backgrounds, which focuses on combination of the partners' resources and best capacities. Lasting relationships concerning innovating joint projects can create significant values for both companies and their customers (Nunes *et al.* 2007).

Srikant & Ghosh (2007) consider this form of strategic cooperation can integrate two brands so as to produce something completely different which incorporates the best characteristics of both brands. Therefore, the value of the new brand, resulting from the combination of both, is greater than the sum of its parts.

Co-branding is a technique used in business aiming to transfer positive associations of the product or brand of a company to a new joint brand, or create operational synergy with established brands (Beezy 2007). Thus, the product or service originating in strategic co-branding cooperation unleashes positive associations in the consumer's mind, given the combination of two or more brands (Helmig *et al.* 2008).

For Chang (2008), the formation of coopetitive co-branding alliances is based on three main motivations: (i) market share; (ii) global operation; and (iii) global branding. The first motivation concerns the need to penetrate the market with the aim of increasing market share. This happens when two brands unite to increase market share and in this way manage to compete with another leading brand. The second motivation is associated with the need to develop a global operation that makes the previously mentioned motivation viable. This occurs, for example, when a brand joins another to increase its brand image within a certain industry. The third motivation emerges when the aim is to implement a global brand strategy, through combination of brands. This is a characteristic situation of strategic alliances between large well known-companies.

This form of strategic coopetition involves two "parents" brands which conceive a new product or service, i.e. a joint brand "child", which carries the respective ADN of the parents. Co-branding is also a public relations tool. This format can help a brand to

[3] For more information, consult: http://www.interbrand.com/.

be respected in new markets through transfer of the reputation and credibility of the partner brand. Co-branding can also be used as a way of rejuvenating a brand in decline, through choosing a strategic partner with similar characteristics to those the brand formerly held (Dive 2007).

For Beezy (2007) and Helmig *et al.* (2008), the choice of a strategic partner is critical, for the purpose of forming a co-branding alliance, in order to attain the objectives inherent in the cooperation. Walchli (2007) warns that brands should take into account, not only the good synergy-generating relationship, but also consumer assessment concerning the association between brands. In this way, consumers may or may not perceive congruence in the collaborating union of brands, through combination of the values of the strategic partners involved in the co-branding coopetitive alliance.

The fundamental goal of co-branding, through combination of two brands, is therefore to attract more customers and maximize the power and reputation that each brand has to offer. This form of cooperation provides the possibility to influence, in psychological terms, the purchasing decision of customers and convey to them the perception that their favourite brand has much more to offer (Panda 2001).

Abratt & Motlana (2002) consider that co-branding contributes to transforming consumers' perception regarding the possible choice between two products of similar perceived quality. Therefore, the union through co-branding with a recognized brand, in global terms, can be an effective strategy to strengthen the brand image perceived by consumers.

According to Pincigher (2005), large companies look for partnerships with other companies of similar size and brand value, in order to create a single product, but with greater added value. By attracting a well-known logotype, a brand adds value to its product, though absorbing the quality image of the partner brand. In addition, the alliance offers the possibility for a partner to access the portfolio of the other strategic partner's loyal customers.

Blackett & Boad (1999) consider that co-branding is a form of cooperation between two or more relatively well-known brands, which allows increased retention of brand image by consumers. Duration of the cooperation covers the medium or long-term, however, the potential net value of launching a new brand is too small to justify the creation or formation of a joint-venture.

Hadjicharalambous (2006) suggests a typology of brand extension, according to: (i) the number of brands involved in the extension; and (ii) the motivations for the extension. Extensions based on one brand are designated as individual brand extensions, while those based on more than one brand are named co-branding extensions.

According to the typology proposed by Tauber (1988), individual brand extensions can be grouped in: (i) line extensions (i.e. introduction of a new item, size or flavour); and (ii) franchise extensions (i.e. entry in a new category, taking advantage of the positive attitude already held by consumers of the brand).

Following Hadjicharalambous (2006), co-branding extensions can also be classified as *homo-brand* extensions if the brands' products belong to the same category, or alternatively as *hetero-brand* extensions, when brands' products are in different categories.

2.3.2. Benefits and obstacles

For Panda (2001), Doshi (2006) and Gopalakrishnan (2007), co-branding allows various benefits. However, Kohli (2002) and Doshi (2006) warn of possible obstacles to adoption of this type of strategic coopetition. Table 2, presented below, describes briefly the main benefits and obstacles of a co-branding coopetitive alliance.

Table 2 – Benefits and Obstacles of Co-branding

Benefits	***Obstacles***
▪ Increased sales and income in markets where the brand is already present and in new markets (Doshi 2006; Gopalakrishnan 2007); ▪ Possibility to enter new markets at a relatively low cost (Doshi 2006; Gopalakrishnan 2007); ▪ New source of finance, since expenses will be shared between partners (Panda 2001; Gopalakrishnan 2007); ▪ Risk-sharing in adverse conditions (Doshi 2006; Gopalakrishnan 2007); ▪ Possibility to penetrate markets more easily and quickly, due to association with the partner brand (Panda 2001; Gopalakrishnan 2007); ▪ Possibility of products being sold at a premium price, due to the added value (Doshi 2006; Gopalakrishnan 2007); ▪ Consumers obtaining products with additional characteristics, function and applications (Gopalakrishnan 2007); ▪ Obtaining synergy in technological specialization in different domains (Gopalakrishnan 2007); ▪ Joint marketing efforts can result in increased geographical spread and media exposure (Gopalakrishnan 2007); ▪ Image and credibility of the product and brand are in evidence (Doshi 2006; Gopalakrishnan 2007); ▪ Better consumer perception of the brand and product (Panda 2001; Gopalakrishnan 2007); ▪ Increased knowledge and recognition of the brand (Panda 2001; Doshi 2006; Gopalakrishnan 2007); ▪ Positive associations of the original partner brands are transferred to the new joint brand (Panda 2001; Doshi 2006; Gopalakrishnan 2007); ▪ Small brands can obtain advantages with well-known brands, able to reach out further with partner's market, positive association, credibility, image and reputation (Gopalakrishnan 2007).	▪ Difficulty for one of the parties to abandon the partnership and establish itself in the market independently (Doshi 2006); ▪ Incompatibility between partners in establishing co-branding due to different business cultures (Doshi 2006); ▪ Negative influence by one of the brands on the common product (Doshi 2006); ▪ Possibility of restricting the market of one of the brands, contrary to what was hoped for (Panda 2001); ▪ Possibility of the behaviour of one of the parties harming the other (Doshi 2006); ▪ Transfer of competitive advantage to the partner, creating a potential competitor (Panda 2001); ▪ Risk associated with exchange of information and know-how between partners (Panda 2001).

Source: Own elaboration.

2.3.3. Forms

Blackett & Boad (1999), using as criteria the lasting quality of co-branding, the potential for creating value and the specificities of brands, identify four forms of co-branding: (i) *reach-awareness*; (ii) *values endorsement*; (iii) *ingredient*; and (iv) *complementary competences*.

From a complementary perspective, Nunes *et al.* (2007), based on the level of value creation for the consumer, the lasting quality expected from co-branding and the individual risk for partner companies (financial risk and risk of losing brand value), propose four more forms of co-branding: (i) *promotional-sponsorship*; (ii) *ingredient*; (iii) *value chain co-branding*; and (iv) *innovation-based*.

For Doshi (2006), co-branding involves the combination of two or more brands in a single product or service, so as to generate relationships of the *win-win* type. According to the same author, this type of coopetitive alliance is differentiated by marketing strategy, brand specifications, problems of privacy, licensing specifications, guarantees, payments and royalties, compensation and notice required for cancelling the contract, taking three forms: (i) *promotional-sponsorship*; (ii) *value chain*; and (iii) *innovation-based*. Table 3, presented below, makes a brief review of the co-branding forms proposed in the literature of reference.

Table 3 – Forms of Co-branding

Authors	***Forms***	***Description***
Blackett & Boad (1999)	*Reach-awareness*	This form aims to achieve recognition of co-branding, and is normally used when brand value is low. The parties can quickly increase their reputation through exposure to each other's customers.
Blackett & Boad (1999)	*Values endorsement*	Concerns cooperations conceived especially to authenticate the value and positioning of one or both brands.
Blackett & Boad (1999) and Nunes *et al.* (2007)	*Ingredient*	The name comes from the fact that co-branding can be an ingredient for company success. It involves the creation of brand value through materials, components or parts involved in the product. A brand is considered an ingredient when it becomes indispensible for another brand to get its finished product through to consumers.
Blackett & Boad (1999)	*Complementary competences*	This is when two powerful and complementary brands decide to make a product which is more than the sum of its parts, and each partner contributes with their main core competences.
Nunes *et al.* (2007) and Doshi (2006)	*Promotional-sponsorship*	Concerns the association of a brand with an event, or of an event with one or more brands. This type of association is carried out fundamentally for the brands to acquire a corporative image, and for events to benefit from the credibility of the brand through sponsorship. It is the most common form, used by the majority of companies.
Nunes *et al.* (2007) and Doshi (2006)	*Value chain*	Aims to give consumers new experiences and increase the brand value perceived by them. This form can be established through a product with a service, between a supplier and a retailer, or between companies that offer similar products or services. Co-branding established between a product and a service allows partners to share specific resources and competences, in order to reach previously inaccessible markets. Co-branding between a supplier and a retailer occurs when a retailer offers a more attractive product/service of a higher quality due to partnership with a certain supplier Finally, co-branding between companies offering similar products or services refers to the creation of a better supply, at a global level, through synergy.

Nunes *et al.* (2007) and Doshi (2006)	*Innovation-based*	Stands out as the creation of completely new products or services, so as to allow a substantial increase in the value perceived by the consumer and the corporative value of the brands. More than other forms, this contributes to strengthen growth potential in markets where the brands already operate and in unexplored markets. However, cooperation management and collaborative organization take on a fundamental role, given that the risks are greater and obtaining greater return can be hindered.

Source: Own elaboration.

3. Case Study: Co-branding of *Apple + Nike*

3.1. Coopetitive alliance: Negotiation rationale and co-branded product

On 23 May 2006 the CEOs of *Nike*, Mike Parker, and of *Apple*, Steve Jobs, together with the athletes Lance Armstrong and Paula Radcliffe, at an event in New York, announced a partnership between these two brands, which resulted in forming a coopetitive alliance of co-branding named *Nike+iPod*. This alliance raised expectations for the launch of innovative products with the campaign slogan of "*Tune your run*" (*Apple – Press Release*, 23/05/2006).

For Steve Jobs - CEO at *Apple* – the company decided to work with *Nike* in order to elevate together music and sport to a new level of performance. The practical result of the alliance was the launch of a personal trainer (or a training colleague), to motivate and control each stage of exercise. According to Mike Parker - CEO at *Nike* - *Nike+iPod* resulted from forming a partnership between two global brands that have a mutual passion, i.e. creation of products or services that let the user enjoy new experiences full of innovation and design, as well as an effective change in the way people perceive and do sport.

The co-branded product created through the coopetitive alliance analyzed is the '*Nike+iPod Sport Kit*', which includes a sensor and a receiver for the *iPod Nano* player. This fitness system operates on a wireless platform, allowing communication between the *Nike+* trainers and the *iPod*. The trainers have a pocket for the sensor which communicates with the receiver, giving instant feedback on the *iPod* screen about individual performance during training. This automatic sensor includes an accelerometer and a *Nike+iPod* patented technology, which allows evaluation of information regarding foot movement and display according to different analysis variables, namely distance covered, time, rhythm and calories burned.

Information about the progress of the run is supplied by headphones and the *iPod* screen. Once the receiver is connected to the player, the *Nike+iPod* option appears on the screen and the user can make a selection from his personal training list or his *Power Song*[4], or from a list of pre-programmed exercises that can be acquired on *iTunes Music*.

Nike, as a global brand, created the *on-line Nike+* community to develop the cult associated with the brand and link consumers in any part of the world. This community had its origins in the partnership established with *Apple*, more precisely through the *iPod* player. The success of this community was only possible through creation of the '*Nike+iPod Sport Kit*', benefiting also from the experience of *Apple* in tribal communities, such as that of *iPod* and *iPoders* (*Hispanic PR Wire - Press Release*, 03/04/2008).

[4] This is understood as previously selected song for moments when an extra dose of motivation is needed.

Nike+ consumers become members of this global community, in which it is possible to accompany the result of their activities individually or together with other members all over the world. When the receiver is removed from the *iPod* and connected to a computer, the user is automatically connected to the *nikeplus.com* site (*Hispanic PR Wire - Press Release*, 03/04/2008).

Taking Beezy (2007) as a reference, the strategic cooperation between *Apple* (*iPod*) and *Nike* is a co-branding alliance formed between two global brands, adhering to a rigorous selection of strategic partners that aimed to establish a relationship leading to mutual benefits, i.e. of the *win-win* type.

The main motivation of global brands for forming a strategic cooperation alliance of co-branding lies in the possibility it gives to combine global insignia. Chang (2008) stresses the motivation associated with the practice of global branding, claiming that the latter is characteristic of strategic cooperation between well-known global brands that are recognized internationally.

Concerning the form analyzed, taking the typology proposed by Nunes *et al.* (2007), this is innovation-based co-branding, based on the supply of a highly differentiated and innovative product: the '*Nike+iPod Sport Kit*'. This product unites *Nike* trainers and the *Apple iPod*. Additionally, from the joint R&D efforts of the two companies, two forms of technology result: (i) a sensor for the trainers; and (ii) a receiver for the *iPod*, which allows communication between both.

Bearing in mind the typology proposed by Blackett & Boad (1999), the strategic coopetition alliance analyzed can also be considered as an example of complementary competence co-branding, inasmuch as two global brands complement each other in developing a joint product that connects music and physical exercise. That union is based on the joining of products and core competences of the two companies involved in the alliance. On the one hand, *Apple* provides its know-how and experience as a manufacturer and supplier of electronic equipment, players and digital music. On the other, *Nike* provides the technology and ergonomic design of running shoes, in this way allowing the creation of a personal trainer with innovative characteristics, production of which is based on intensive incorporation of knowledge and technology.

In this coopetitive co-branding alliance between *Nike* and *Apple*, the goal is to reach a balanced combination that satisfies within integrative negotiation logic the interests at stake, to the advantage of both parties, in this way trying to form a relationship of the *win-win* type. That relationship follows an orientation of the integrative type, which is seen to be cooperative, so that both *Nike* and *Apple* are able to maximize their benefits. This negotiation *rationale* emphasizes reciprocal confidence and credibility, in this way stimulating creativity, innovation and the sharing of constructive and dynamic opinions. Therefore, a more lasting relationship is obtained between the parties and greater stability is conferred to the solution negotiated on a basis of the interdependence of the negotiation parts.

Taking as reference the dual model of concerns, the dominant strategy corresponds to the quadrant: collaborate: Max-Max (see Figure 1 below); which represents the maximization of joint reputation *Nike* + *Apple* (*iPod*).

Figure 1 – Dual Model of Concerns

Concern about the other parety's performance	+ Concern about own performance	-
+	Max-Max **Collaborate** (Win-Win)	Max-Min **Accommodate** (Lose, Win)
-	Min-Max **Compete** (Win, Lose)	Min-Min **Avoid** (Do not negotiate)

Source: Adapted from Rahim (2002:217).

Although the approach is of the *win-win* type, the gains may not be equal for the parts involved. Therefore, a relationship of the *WinMax-WinMin* or *WinMin-WinMax* type can emerge. Also, concern or interest by one of the parts about the other's performance can be divergent. This quadrant, in a situation of coopetition, can vary between *MaxMax-MaxMin* (one part gains more, the other gains less) and *MaxMin-MaxMax* (one part gains less, the other gains more).

3.2. Coopetitive game: Application of game theory

In the field of game theory, the process of decision-taking is set in a context of strategic interaction or interdependence. Before going on to elaborate the representative models of the formal situations proposed, some calculations were made which give a basis to the use of theoretical payoffs with respect to the brand image value of the two companies studied.

Therefore, calculations were made of the annual growth rates, on average, of the brands' value in the period 2001-2008 (see Table 4). The period began in 2001, corresponding to the launch of the *Apple iPod*, which made the coopetition alliance viable, and ended in 2008, given the information available. The positions held by *Nike* and *Adidas* in the ranking of reference were also used to estimate the increased brand value of *Apple*, in the case of the company forming an alternative strategic cooperation alliance with *Adidas* global brand.

Table 4 – Position in the Ranking and Value of Global Brands: Nike, Apple and Adidas

	Nike			***Apple***			***Adidas***	
	Position in ranking	**Value (million US$)**	**Annual variation**	**Position in ranking**	**Value (million US$)**	**Annual variation**	**Position in ranking**	**Value (million US$)**
2001 (Launch of *iPod*)	34	7.590		49	5.460		70	3.650
2002	35	7.720	2.0%	50	5.320	-3.0%	68	3.690
2003	33	8.170	6.0%	50	5.550	4.0%	67	3.680
2004	31	9.260	13.0%	43	6.871	24.0%	67	3.740
2005	30	10.114	9.0%	41	7.985	16.0%	71	4.033
2006 (Co-branding alliance)	31	10.897	8.0%	39	9.130	14.0%	71	4.290
2007	29	12.004	10.0%	33	11.037	21.0%	69	4.767
2008	29	12.672	6.0%	24	13.724	24.0%	70	5.072

Annual growth rate, on average (2001-2006)	7.6%	11.0%	
Annual growth rate, on average (2006-2008)	8.0%	22.5%	
Variation in the annual growth, on average, following the co-branding alliance (2006-2008) - (2001-2006)	+0.4	+11.5	

Source: Own elaboration based on the rankings of *Interbrand*[5].

Taking as a reference the values of the *Apple*, *Nike* and *Adidas* brands on the *Interbrand* rankings (see Table 4), we make a representation of the decision tree referring to the strategic coopetition game (see Figure 2). In this way, from an analysis of the negotiation process of the strategic coopetition, theoretical payoffs result from the values of each brand. This application considered that *Nike* started the process, since it took the initiative in proposing a co-branding alliance with *Apple*.

Nike had the innovative idea to manufacture trainers that allowed communication with a music player and contacted *Apple* so that an entrepreneurial initiative of co-branding could be developed, which resulted in *Nike+iPod* [6].

For the purpose of representing the possible space for strategic action implemented in this coopetition game, different possibilities are considered, according to the notes in Table 5 below.

Table 5 – Strategic Actions: *Nike + Apple*

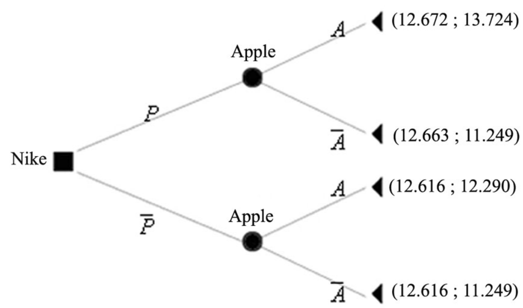
P	Propose strategic coopetition
$\overline{P}$	Do not propose strategic coopetition
A	Accept strategic coopetition
$\overline{A}$	Do not accept strategic coopetition

Source: Own elaboration.

The theoretical payoffs are represented in a decision tree (Figure 2) and the respective payoff matrix (Table 6), which considers a game with perfect information where *Nike* may or may not propose a strategic coopetition alliance that *Apple* may or may not accept.

[5] Data obtained from: http://www.interbrand.com.
[6] Information taken from: http://www.appleinsider.com.

Figure 2 – Game of Strategic Coopetition: Decision tree



Source: Own elaboration.

Table 6 – Payoff Matrix

Nike	***Apple***	**Payoffs**	
P	A	12.672	13.724
P	$\overline{A}$	12.663	11.249
$\overline{P}$	A	12.616	12.290
$\overline{P}$	$\overline{A}$	12.616	11.249

Source: Own elaboration.

4. Discussion of the results

The theoretical payoffs obtained from the application of the game theory mentioned above, show different results which are highlighted and discussed as follows. Firstly, if *Nike* proposes a strategic coopetition alliance to *Apple* which accepts, these global brands will increase on annual average the respective brand values by 8.0% and 22.5%, in the period 2006-2008 [see PA - *Payoff* (12.672; 13.724)].

Secondly, if *Nike* proposes a strategic coopetition alliance to *Apple* which does not accept, then *Nike* will record a growth of 7.6% in its brand value[7], with 0.2 percentage points added, corresponding to half[8] the difference in the variation in the annual growth rate, on average, obtained with formation of the co-branding alliance (see Table 4). If *Apple* does not accept the co-branding proposal, then it will record an increase of 11.0% in its brand value, referring to annual growth rate, on average, in the period 2001-2006 [see $P\overline{A}$ - *Payoff* (12.663; 11.249)].

Thirdly, if *Nike* does not propose a strategic coopetition alliance to *Apple*, but the latter wishes to establish this type of alliance with another global sports brand, then *Nike* will record a 7.6% increase in its brand value. This increase represents a value equivalent to annual growth rate, on average, in the period 2001-2006. In this context, we consider the possibility of *Apple* forming a similar agreement with for example *Adidas*. Taking as a reference the classification and brand value of *Nike* (31st position) in the ranking of the 100 best world brands in 2006 (the year of forming the co-branding

[7] This figure (7.6%) corresponds to annual growth, on average, in the period 2001-2006, i.e. before signing the co-branding alliance.

[8] It is considered that *Nike* would make an effort to enter the *Nike*+ project alone, but in that scenario it would be subject to only half the impact expected from the fulfilment of the joint project.

alliance), the hypothetical formation of a similar alliance between *Apple* and *Adidas* (which occupied 71st position in the same ranking), will give a theoretical payoff of 5.0%, representing the increase in the *Apple* brand value, calculated proportionately to the increase obtained through the co-branding alliance formed between *Apple* and *Nike* [see $\overline{P}A$ - *Payoff* (12.616; 12.290)].

Fourthly, if *Nike* does not propose a strategic coopetition alliance to *Apple* and the latter does not form a similar agreement with another global sports brand, then the brands will increase their brand value by 7.6% and 11.0%, respectively, corresponding to annual growth rates, on average, in the period 2001-2006 [see $\overline{P}\overline{A}$ - *Payoff* (12.616; 11.249)].

In the present case of co-branding, the combination of brand values representing the Pareto optimal[9] means that *Apple* cannot increase its brand value without causing a reduction of the *Nike* brand value, and *vice-versa*. Therefore, formation of a co-branding strategic coopetition alliance between *Nike* and *Apple* provides a perfect combination of strategic actions expressed by achieving the theoretical payoff: (12.672; 13.724); which maximizes the brands' combined value.

To sum up, both brands obtain benefits from forming a co-branding coopetitive alliance, but according to theoretical payoffs, the gains obtained are not shared equally. After signing the co-branding alliance, on one hand *Nike* recorded a 0.4 percentage points variation in its brand value, and on the other hand *Apple* recorded a variation of 11.5 percentage points. The strategic coopetition alliance between *Nike* and *Apple* is based on a relationship of the *WinMin-WinMax* type, since both brands obtain benefits, although in unequal measure. However, by signing a co-branding strategic coopetition alliance, *Apple* and *Nike* embarked on a mutually beneficial relationship which allowed them to obtain favourable results, shown by theoretical payoffs that point towards obtaining unequal increases in terms of individual brand value.

5. Conclusions and implications

The application of the game theory in the form of simulation of a strategic coopetition game, with perfect information, allowed the identification of Pareto optimal which corresponds to the situation of forming the co-branding strategic coopetition alliance. Although this is a relationship of the *win-win* type, benefits resulting from formation of the strategic coopetition alliance are unequal. Setting out from theoretical suppositions, through co-branding, *Apple* obtained a greater increase in brand value than *Nike*. However, for both global brands analyzed, there were increased sales, increased market share and greater international recognition of the brand, in individual terms. Moreover, there was an increased market penetration through sharing portfolios of loyal clients. Therefore, the joint communication efforts, and the exchange of specific means and resources, namely technology, innovation and marketing, contributed to increased individual brand values, through supply and transmission of a greater benefit to users of the co-branded product: '*Nike+iPod Sport Kit*'.

The dominant strategy corresponds to a cooperative scenario, although it should be stressed that the returns generated through formation of the strategic coopetition alliance were unequal in the period of analysis. In spite of the results representing the maximization of the joint reputation associated with *Nike* + *Apple* (*iPod*), the increase in the *Nike* brand value, since 2006, has been on annual average 8%, whereas the value of

[9] The Pareto optimal corresponds to a perfect combination, for both parts (Nakayama 1980).

Apple has recorded annual rates, on average, of 22.5%. The differential between the growth observed in the period 2006-2008, and the annual growth, on average, of each brand reveals that the co-branding coopetitive alliance had a greater impact on the *Apple* brand value than on *Nike*. The inequality of benefits arising from the co-branding between *Nike* and *Apple* suggests a relationship of the *WinMin-WinMax* type, where *Nike* gains less (variation of 0.4 percentage points on its brand value) and *Apple* gains more (variation of 11.5 percentage points on its corresponding brand value).

Concerning to limitations, it should be stressed that the strategic coopetition game, despite using payoffs based on brand values, requires the use of theoretical presuppositions in the simulation. Another limitation concerns the use of the growth rate of brand value, in the short period of 2006-2008 after signing the co-branding agreement, but this is justified by the lack of information available.

As for operational management, the results obtained from the case of co-branding between *Apple* and *Nike* show that this form of strategic coopetition can bring benefits for strategic partners. Nevertheless, whatever the initial brand value of partners involved in the co-branding strategic coopetition alliance, the benefits obtained may not be equally distributed.

In a context of brand internationalization, although the sharing of the benefits may not be equal, this study contributes to drawing the attention of managers and practitioners to the advantages associated with forming co-branding strategic alliances. In this way, companies can increase sales, penetrate new markets with costs and risks shared, complement competences, expand their client portfolio, set higher prices due to the value added by the co-branding, and increase the reputation and credibility of their brands. Indeed, it is important to convey the proven idea that the combination of brands increases value through credibility transfer.

This study also suggests implications for managers and practitioners interested in the issue of strategic coopetition between companies holding global brands that aim to compete in a global market. Therefore, in the growth processes of global brands, managers should consider the possibility of cooperating with strategic partners, namely through formation of coopetitive alliances between brands oriented towards joint promotion and/or development of a new product or technological service with high added value.

In future investigations, using games with imperfect information and based on contract information relevant for this purpose, we suggest on one hand analyzing the returns obtained from formation of co-branding alliances between global brands with similar values and belonging to the same sector of activity, and on the other hand study growth strategies based on coopetitive alliances involving global brands and technologically-based start-ups without significant brand value.

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