

**PERCEPTION OF INNOVATION
AND CONSUMPTION
IN THE “PÁTRIA DE CHUTEIRAS”**

Wagner Júnior LADEIRA

*Universidade do Vale do Rio do Sinos
(Unisinós)
950 Av. Unisinós, Bairro Cristo Rei,
São Leopoldo-RS, Brazil
e-mail: wjladeira@gmail.com*

Rafael Mendes LÜBECK

*Faculdades Senac Porto Alegre
130 Rua Cel. Genuíno, Bairro Cidade Baixa,
Porto Alegre-RS, Brazil
e-mail: rafael.lubeck@gmail.com*

Clécio Falcão ARAÚJO

*Faculdades Senac Porto Alegre
130 Rua Cel. Genuíno, Bairro Cidade Baixa,
Porto Alegre-RS, Brazil
e-mail: clecioa@bol.com.br*

Abstract. *This article aims to analyse the antecedents that influence the perception of innovation in the design of football boots. For this, we analysed the relationships between classical studies in the area of marketing and the perception of innovation in football boots. In the city of Porto Alegre, Brazil, 421 questionnaires were applied to amateur soccer players. The constructs were validated using structural equation modelling. Analysis of the model reveals that the perception of innovation in boot design is influenced by six constructs: unpopular choice counter-conformity, creative choice counter-conformity, store environment, useful attributes and informational and normative influences.*

Keywords: marketing innovation, consumption, innovation, football boots, Structural Equation Modelling.

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1. Introduction

That Brazil is the country of football and there are thousands of fields scattered throughout the country is almost common knowledge in the popular imagination in Brazil and around the world. The term “*Pátria de Chuteiras*” (approximate translation “*Homeland of Football Boots*”), attributed to the Brazilian playwright Nelson Rodrigues, expresses the strength of the love that Brazilians in general have for football. Perhaps, this expression cannot be adequately translated into other languages and the clearest way to explain it to say that, in general, Brazilians are so passionate about football that events associated with this sport are able to paralyze the country, dominating conversations among groups of people or even arousing hostility among people who support different teams.

In Brazil there are thousands of fields in which amateur football players consume products while dreaming of being a Pele, Romario, Ronaldo or Neymar, among other the great stars of football. Due to the increase in the number of practitioners in Brazil (CBF, 2011), one product that has seen a large growth in sales recent years is the football boot. Famous brands such as Nike, Adidas, Reebok and Umbro hold much of the market and due to the intense competition this product has undergone various improvements, in terms of power, precision, stability, grip and cushioning.

These improvements are accessible to both professional and amateur players who can purchase them at specialty retail stores. The *Fédération Internationale de Football Association* (FIFA) estimates there to be around seven million soccer players in Brazil. While the *Brazilian Football Confederation* (CBF) provides the following figures: 308 stadiums with more than five thousand seats, eleven thousand registered players, 800 federated clubs and over two thousand Brazilian athletes playing abroad, and about thirteen thousand amateurs teams participating in organized competitions, besides the millions of amateur athletes who do not declare any link to any team. Taken together, this suggests a total of thirty million practitioners (FIFA, 2011; CBF, 2011).

In these estimates, the CBF shows that, of the US\$ 250 billion a year that football turns over in the world, Brazil contributes \$ 3.2 billion. Annually, 3.3 million pairs of football boots are manufactured in the country. A large number of people are involved in football, there are about 20,430 football fields in 2602 municipalities (47.3% of the country’s total) according to a survey by the Federal Government (CBF, 2011). These figures explain the growth in investment in innovation of sporting goods, such as football boots.

Innovation in sporting goods can be understood as the ability to create a substantially new value for the consumer (Damanpour et al., 2009; Schwarz and Hunter, 2008; Mullin and Hardy, 2007) that is responsible for changes in technology and improvements in products (Jansen et al., 2006; Paladin, 2008). Due to the heightened competitiveness, marketing activities have begun to include strategies designed to reach a greater number of consumers (Hawkins et al., 2010; Tajeddini et al., 2006).

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In this context, the football boot scenario in Brazil can be represented by the slogan “*Pátria de Chuteiras*” (“*Homeland of Football Boots*”), which arose as a political expression in the 1970s in order to stimulate nationalism during the period of the military regime. However, this slogan can serve to express the current consumption of football boots in Brazil. By crossing data available from the last Census conducted by the Brazilian Institute of Geography and Statistics (IBGE) with that from the CBF it is estimated that the male economically active population (EAP) in Brazil annually consumes more products related to the sports industry than it spends on health and education services (IBGE, 2011; CBF, 2011).

Based on the initial evidence, which indicates the large consumer market for football boots and the potential for innovations available to those consumers, the present article sets out from the following question: Are those people that play football in the “homeland of football boots” aware of the improvements introduced by the manufacturers? And if so, what are the factors that influence the perception of innovation in the design of football boots?” To answer these questions, the following objective was established: to analyse the antecedents that influence the perception of innovation in the design of football boots currently available on the market.

In an attempt to achieve this objective, the relationships between classical studies in the area of marketing and the perception of innovation in football boots were analysed. To understand what influences the perception of innovation in football boots, it was decided to examine four traditional areas of marketing: (a) need for uniqueness; (b) store environment; (c) perceived product value; and (d) interpersonal influences. In this survey, 421 questionnaires were applied to amateur football players in the metropolitan area of Porto Alegre, capital of the state of Rio Grande do Sul. The constructs were validated with the aid of structural equation modelling.

2. Perception of product innovation and the research hypotheses

Innovation in products can be defined as the technology applied to products in order to generate new attributes, whose characteristics or uses differ from similar previously produced products (Tajeddini et al., 2006; Hawkins et al., 2010). Knowledge about a product is crucial for the ability to perceive innovation in a product (Paladin, 2008). Innovations in products can be more easily seen when their characteristics are tangible and less complex, and the consumer is able to view the changes as innovative features. This perception of something of value in the product facilitates the decision to purchase, increasing the likelihood of success of the possible innovation (Tajeddini et al., 2006; Hawkins et al., 2010).

Based on these facts, the constructs used to assess the perception of innovation in football boots were based on four areas in the study of marketing: (a) need for uniqueness, (b) store environment, (c) perceived product value (d) interpersonal influences.

2.1. Need for uniqueness

The need for uniqueness is analyzed in studies of consumer behaviour because it impacts on consumer preferences (Berger and Shiv, 2011; Snyder and Fromkin, 1977, 1980). The need for uniqueness creates a motivation to purchase products that reflect an image, which differentiates the purchaser from others (Lynn and Snyder, 2002). This need is materialized by the acquisition and use of differentiated products in order to enhance social image, thus avoiding similarity in comparison to other individuals (Tian et al., 2001). Consumers in need of differentiation are attracted to scarce products and are willing to make a greater effort to purchase products considered rare or unique, which is common in those brands perceived as luxury brands (Lynn and Snyder, 2002).

Consumers that seek uniqueness avoid similarity by acquiring new brands and less sought after products, thus breaking the rules of certain social groups (Feltham, 1998; Tian et al., 2001). These consumers also look for creative and less popular choices that are characterized by the acquisition of products involving a certain degree of risk in the evaluation of other groups, but which may receive positive evaluations in relation to their own reference group (Tian and McKenzie, 2001). Based on the above understanding and characterization of this type of consumer, the following hypotheses were formulated:

Hypothesis 1a: Similarity avoidance behaviour has a negative effect on the perception of innovation in the designs of football boots, i.e., consumers who avoid similarity do not perceive innovation in the designs of football boots.

Hypothesis 1b: Less popular choice behaviour has a negative effect on the perception of innovation in the designs of football boots, i.e. consumers of football boots who make less popular choices tend not to perceive innovation in the designs of football boots.

Hypothesis 1c: Creative choice behaviour has a negative effect on the perception of innovation in the designs of football boots, i.e., consumers who make creative choices do not usually perceive innovation in the designs of football boots.

2.2. Store environment

Studies that attempt to identify the factors that increase sales performance in the retail environment (Jin and Kim, 2001) claim that marketing strategies should focus on attracting potential consumers (Levy and Weitz, 2006). De Wulf and Waterschoot (1999) mention that buyers value the attributes of the store environment and are guided by their positive perceptions at the time of purchase (Sinha and Banerjee, 2004).

The attributes of the store environment are characterized as either tangible or intangible. The tangible attributes include the product display, cleanliness of the environment, lighting and the store employees (Sherman et al., 1997). The perception

of these attributes may change purchase intentions (Schifferstein and Blok, 2002). The intangible attributes are more aligned with the perception of services provided in the environment (Hoffman and Turley, 2002; Korgaonkar et al., 1985) and are thought of as a means of creating an atmosphere that is conducive to consumption (Hoffman and Turley, 2002). Based on these understandings of the store environment, the second hypothesis was formulated:

Hypothesis 2a: The store environment has a positive effect on the perception of innovation in the designs of football boots.

2.3. Perceived value in the product

The notion of value for the customer is seen as a strategic issue for marketing. Zeithaml (1988) understands the perceived value to be an assessment that the client makes regarding the usefulness of the product, based on past experience. Among the benefits perceived by consumers, two attributes are observed frequently in marketing studies: utilitarian and hedonic (Veryzer and Wesley, 1998; Chitturi et al., 2008). These two attributes influence consumers based on behavioural and emotional aspects (Chitturi et al., 2008; Chitturi et al., 2007; Novemsky and Ratner, 2003; Hirschman and Holbrook, 1982) and it is important to distinguish between these attributes in order to understand the decision to consume.

The hedonic aspects are subjective and influence the consumption experience, because they inherently generate consumer satisfaction (Hirschman and Holbrook, 1982; Ramanathan and Menon, 2006). The hedonic attributes are intangible and express the emotional aspects of consumers (Novemsky and Ratner, 2003). They are based on personal experience and reflect experiences related to comfort, confidence and joy (Hirschman and Holbrook, 1982; Novemsky and Ratner, 2003; Mäenpää et al., 2006). The utilitarian value emphasizes the tangible attributes of the product and relate to the functionality and improved functionality of the product (Keller, 1993; Liang and Wang, 2004). This type of advantage is inherent in the product and is associated with the basic motivations of consumers (Keller, 1993; Liang and Wang, 2004). These insights into the perceived value of products form the basis of the hypotheses 3a and 3b:

Hypothesis 3a: The hedonic value has a positive effect the perception of innovation in the designs of football boots, i.e. the expression of the emotion aspects at the time of purchase causes the consumers to perceive innovations in the designs of football boots.

Hypothesis 3b: The utilitarian value has a positive effect on the perception of innovation in the designs of football boots, i.e. the perception of the tangible and functional attributes of the product at the time of purchase causes the consumers to perceive innovations in the designs of football boots.

2.4. Interpersonal influence

Of particular importance among the factors that affect consumption is the influence of others (Bearden et al., 1989). Theoretical models of consumer behaviour demonstrate the role of interpersonal influence on attitudes, norms, values, aspirations and buying behaviour (Lascu et al., 1995). Individuals are influenced by their reference groups and may modify the decision to purchase due to interference from other individuals (Bearden et al., 1989). Bearden and Etzel (1982) define the reference group as individuals or groups that influence the behaviour of one or more persons.

Studies carried out in the 1980s developed a scale that assessed interpersonal influence based on informational and normative factors (Bearden and Etzel, 1982). Deutsch and Harold (1955) were the first to use informational and normative data and demonstrated that they are manifested by interpersonal influences. However, Bearden et al. (1989) argue that informational influence is perceived at the time the individual has difficulty evaluating the benefits of the decision to purchase (Netemeyer et al., 1992). Consumers use interpersonal information to increase their knowledge about the product or service so as to classify the purchase decision (Kaplan and Miller, 1987). Normative influence occurs when the individual tends to decide based on the expectations of others (Park and Lessig, 1977). This fact demonstrates that the individual seeks to make his/her purchasing decision to gain recognition or avoid punishment from the group (Deutsch and Harold, 1955; Lascu et al., 1995).

Hypothesis 4a: Informational interpersonal influence has a positive effect on the perception of innovation in the designs of football boots, i.e., consumers that seek information about products or brands from close acquaintances tend to perceive innovations in the designs of football boots.

Hypothesis 4b: Normative interpersonal influence has a positive effect on the perception of innovation in the designs of football boots, i.e., consumers who tend to decide in accordance with the expectations of others tend to perceive innovation in the designs of football boots.

3. Methodological procedures

To achieve the proposed objective the methodological procedure was structured into four parts: (a) the development of scales and the data collection instrument; (b) sample characteristics; (c) purification of the database; and (d) the Structural Equation Model (SEM) applied in the study.

3.1. Developing the scales and the data collection instrument

To test the hypotheses, an empirical survey was organized in which data that could be used to validate the relations established in the model were collected. Some dimensions were based on existing scales (Netemeyer et al., 1992; Bearden et al., 1989;

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Tian et al., 2001; Snyder and Fromkin, 1980) while others were based on the development of new scales, as seen in Table 1.

Table 1

Constructs and evaluated items in the model

CONSTRUCTS	ITEMS EVALUATED
Perception of innovation in the development of the product	Perception of innovation
Normative	Interpersonal Influence (Existing scale)
Informational	
Creative choice counter conformity	Need for uniqueness (Existing scale)
Unpopular choice counter conformity	
Avoid similarity	
Utilitarian factors	Perceived value
Hedonic factors	
Tangibles and intangibles	Store environment

The items within the constructs, both the latent and dependent variables, were assessed using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Other empirical studies (Netemeyer et al., 1992; Bearden et al., 1989; Tian et al., 2001) related to the issues associated with the constructs, have used this scale and provided evidence of validity and reliability.

Once the questionnaire was structured, with the variables and scales, it was reviewed by five researchers and five football players to test its efficiency. The reviewers were able to describe their views regarding the proposed theme and suggest adjustments. The football players recommended a reduction in the variables relating to the construct “need for uniqueness”. In the final questionnaire the item need for uniqueness had a total of fifteen variables. The researchers suggested creating a few more questions that would aid in identifying the consumption and activities practiced, such as: What brand and model of football boots were worn? Length of time practicing the sport? How many pairs of football boots were used?

Following the contributions from the pre-test, the questionnaire was divided into six parts. The first part contained eight questions that assessed the perception of innovation in the product design. The second dealt with the item ‘interpersonal influences’ and was divided into two parts: normative influence with five questions and informational influence with five questions. The third part rated the item ‘need for uniqueness’, which was divided into: creative choice (five questions), unpopular choice (five questions) and avoid similarity (five questions). The fourth part focused on the item ‘perceived value’ and was divided into utilitarian and hedonic attributes, each with five questions. In the fifth part, the construct ‘store environment’ was evaluated with five questions. Finally, the sixth part contained eleven questions that summarize the personal and football boot consumption characteristics of the respondents.

3.2. Sample characteristics

The questionnaires were applied to football boot consumers who played amateur soccer in Porto Alegre – RS, Brazil. A total of 421 questionnaires were collected from practitioners who used association football and seven-a-side boots (both products are derived from the lines of professional football boots). The data were collected over a period of five months, from the beginning of January to the end of May, 2011.

The sample size was calculated on an infinite population, with an estimation error of 5% and a critical value that corresponds to the desired confidence interval of 95.5%. Given these values the sample would need to be larger than 400. The figure of 421 respondents meets the sampling conditions and those required doing data analysis by means of structural equation modelling, available in the works of Hair et al. (2006) and Schumacher and Lomax (1996).

3.3. Database cleansing

To prepare the data for subsequent analysis, the database was first cleansed. The questionnaires were initially evaluated using frequency analysis to check the existence of missing responses, which reveals the questions that were not well understood by the respondents. None of the questions were eliminated at this stage, since none were found to have a significant number of missing responses.

Following this validation, the outliers (i.e. questionnaires from respondents that left many questions blank or who used only one or two points from the interval scale) were eliminated. First the questionnaires in which the respondent had used only one or two points from the rating scale were analyzed. This condition is characterized as a dichotomous non-interval response, which ultimately influences the interpretation and analysis of statistical tests. During this stage, 32 questionnaires were eliminated.

To complete the data cleansing process, those questionnaires in which the respondents failed to answer more than 10% of the questions were eliminated. As the questionnaire included 58 questions, the questionnaires that had at least six unanswered questions or deletions were eliminated. In total, 11 questionnaires were eliminated at this stage. Therefore, the database cleansing process led to a total of 43 questionnaires being removed, leaving a total of 378 observations for subsequent analysis.

3.4. The Structural Equation Model (SEM) applied in the study

In this study, the method of Structural Equation Modelling (SEM), which examines a series of relationships that identifies latent variables by simultaneously examining multiple dependence relationships between those variables, was applied (Hair et al., 2006; Steiger, 1990).

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For the final adjustments of the model and its hypotheses, the following indices were used: Chi squared/degrees of freedom, probability level, Relative Fit Index (RFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI) and Root Mean Squared Error of Approximation (RMSEA). The criteria for assessing the fit of the model were found in Byrne (1998) and Hu and Bentler (1999). Figure 1, below, shows the model with the listed hypotheses, which are the subject of analysis in the following chapter.

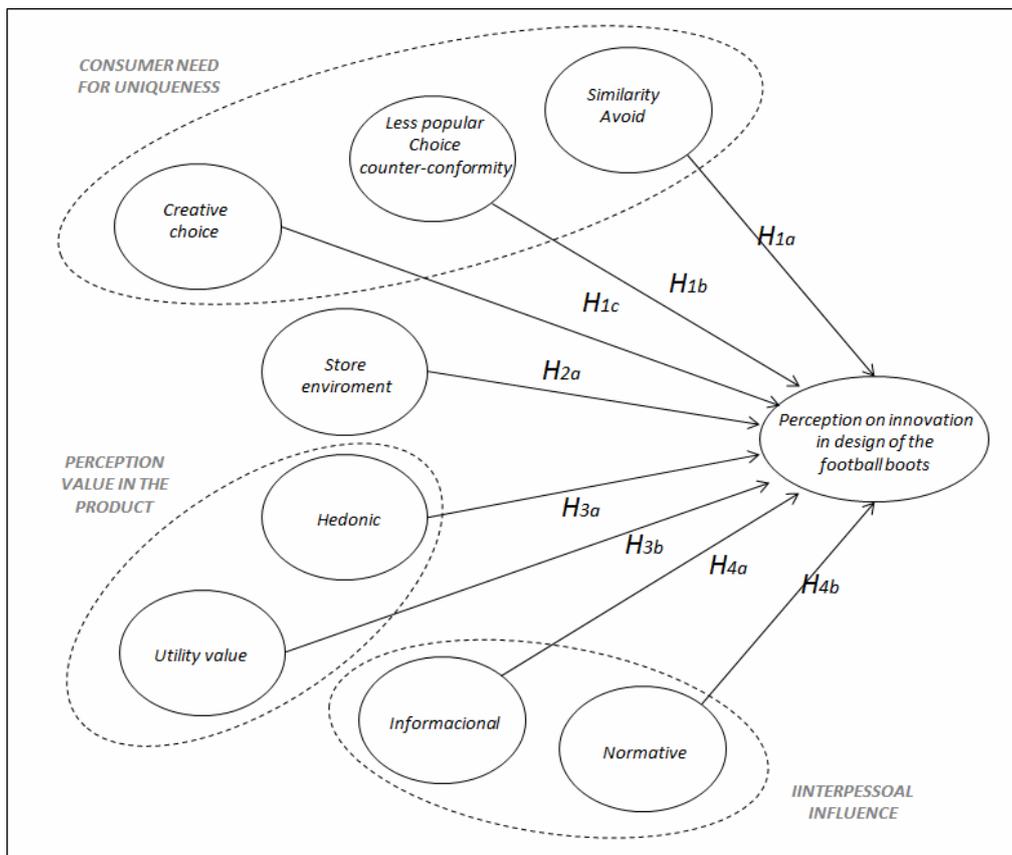


Figure 1. Hypothesized model

4. Interpretation and analysis of the results

To facilitate understanding of the interpretation of the data, this chapter is divided into three parts: (a) Descriptive Statistics-Sample characteristics, (b) Validation of the individual constructs, and (c) Analysis of the Integrated Model.

4.1. Descriptive statistics – sample characteristics

As mentioned above, the sample was collected from among amateur players who practiced association and/or seven-a-side football. Of the 378 observations, 234, around 61% of the sample, used seven-a-side football boots, while the remainder used association football boots. Analysis of variance (ANOVA) was used to compare these two groups and showed there were no significant differences in the mean responses in the studied variables.

All respondents were male, with 84%, on average, being aged between 18 and 35 years. The monthly income of 76% of the respondents ranged between R\$ 1,000.00 and R \$ 5,000.00. With regard the number of times per week they practiced the sport, 68% reported playing more than twice a week. About 98% of respondents had practiced the sport for over a year. With respect to pairs of football boots, about 97% mentioned they had more than one pair and about 75% said they had consumed more than five pairs during their life.

The three brands most consumed by the respondents were: Nike (42.4%), Adidas (22.25%) and Reebok (9.32%). Thirteen different brands of football boots were noted in the field research. Of the models available on the market those that were best known to the amateur athletes were: Adidas F50 (12.21%), Nike Mercurial (9.42%), Adidas Predator (7.54%), Adidas AdiPURE (5.83 %) and Nike CTR360 (4.76%). Although nearly all the respondents cited a brand of football boot, only about 37% of the respondents were able to mention a model of football boot. This demonstrates that with regard to football boots, brand awareness is more present in consumption than model awareness.

Regarding the innovations existing in the football boots, all the respondents claimed to know some kind of existing special technology for the boots. This item was rated on a scale from 1 (totally unaware of innovation) to 5 (totally aware of the innovation). The highest mean (4.57 with a standard deviation = 0.97) was knowledge of 'elite packs', which are lightweight models and are similar to the more expensive model of football boots. This model is similar in appearance to more expensive boots and includes characteristics of the copied model. Secondly, knowledge of the differences between synthetic materials and leather was mentioned with an average of 4.42 and a standard deviation = 1.17. Thirdly, the technological features that give more power, precision and effect to the boots were mentioned (average 4.08 and a standard deviation = 1.54).

Another four features were classified with between 3 and 4 points on the Likert scale, which are: (a) pressure exerted by the foot redistributing the air around the sole, affecting stability (3.32, standard deviation = 1.76); (b) some materials give more grip, allowing for greater sprint speed (3.28, standard deviation = 1.45); (c) type of cushioning allows greater ball control (3.14, standard deviation = 1.18); and (d) alternative designs that innovate the appearance and appear similar to those of professionals, but include different technology (3.04, standard deviation = 1.55).

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Briefly, it can be seen that the perception of innovation in football boots is identified in the sample, since seven evaluated items have means greater than three on the Likert scale, showing that the respondents were able to perceive innovation in the designs of the football boots.

4.2. Individual validation of the constructs

Before applying the analysis techniques for confirmation of the constructs it was decided to examine the evaluation model using exploratory methods. Each construct was analyzed separately using exploratory factor analysis (EFA). This was done to ensure the rule of one-dimensionality. Then the items were submitted to an oblique rotation, in the expectation the factors would be correlated.

In general, there is evidence for convergent and discriminant validity of almost all the constructs, since the average variance extracted (AVE) of all the constructs had a value above 0.5. Only in the constructs ‘hedonic attributes’ and ‘avoid similarity’ values of 0.459 and 0.423 were obtained, respectively. In addition, Cronbach’s alpha was also used to assess the internal consistency. All values were above 0.8 with the exception of the items ‘hedonic attributes’ and ‘avoid similarity’, which obtained alphas of 0.541 and 0.602, respectively.

The AVE and the low Cronbach’s alpha associated with the construct ‘hedonic attributes’ suggest the need to implement confirmatory factor analysis (CFA), since the relationship of an indicator with other indicators of the same latent variable may reflect real differences in the characteristics of the indicators being measured in the construct ‘hedonic attributes’. Initially, it was decided to remove the constructs ‘hedonic attributes’ and ‘avoid similarity’.

Table 2

Convergent validity and reliability

Constructs	AVE	Cronbach Alpha
Perception of Innovation	0.865	0.911
Normative Influence	0.762	0.793
Interpersonal Influence	0.856	0.852
Creative choice counter-conformity	0.801	0.791
Unpopular choice counter-conformity	0.726	0.774
Avoid similarity	0.806	0.842
Utilitarian Factors	0.423*	0.602*
Hedonic Factors	0.459*	0.541*
Store environment	0.792	0.851

4.3. Analysis of the integrated model

After the EFA, the next step was to evaluate the integrated model. During this stage, the main objective was to assess the relationships between the constructs and

variables in the proposed model, i.e., the hypothesized theoretical structure. In the final model, the first hypothesis 1a which postulated that consumers that avoid similarity do not perceive innovation in the designs of football boots was not considered and thus had to be discarded for estimates of new relationships. Hypothesis 1b, which corresponds to the inter-relationship between the constructs 'unpopular choices' and 'perception of innovation' indicated that consumers who make unpopular choices tend not to perceive innovation of the designs of football boots, was validated with a value of -0.14 . Hypothesis 1c was validated with a value of -0.22 , demonstrating that consumers who make creative choices do not usually perceive innovation in the designs of football boots.

Regarding the construct 'store environment', in the new theoretical model it was found that the relationship of hypothesis 2a, which postulates that the planned organization of the store environment makes consumers perceive the innovation in the designs of football boots, was present in the model, with a value of $+0.56$. Hypothesis 3a, which postulates that the expression of emotional aspects at the time of purchase makes consumers perceive the innovation in the designs of football boots, was not found in the theoretical model and thus had to be discarded for estimates of new ratios. With respect to item 'perceived value' hypothesis 3b, linked to the utilitarian construct was validated, with a ratio of $+33$, which means that the perception of tangible and functional attributes of the product at the time of purchase makes consumers perceive innovation in the designs of football boots.

In the case of hypothesis 4a, which suggests that consumers seeking information about products or brands from close acquaintances tend to see perceive innovation in the designs of football boots, was validated with a value of $+19$. With respect to hypothesis 4b, it was found that, contrary to the proposal in the theory, consumers who tend to decide in accordance with the expectations of others do not tend to perceive the innovation in the designs of football boots. Thus, the assumption was not confirmed, as it obtained a ratio of -32 .

With the validation of some hypotheses (H:1b; H:1c; H:2a; H:2b; H:4b), the reinterpretation of another (H:4a) and the removal of others (H:1a; H:3a), the new relationships led to changes in the original model. Based on the changes in the model, following the recommendation of Kline (1998) and Hair et al. (1999), the theoretical model was evaluated based on the goodness of fit indices of the model and the statistical significance of the estimated regression coefficients. At this stage, it was decided to adopt a strategy of enhancing the model. It is noteworthy that in the modification of the proposed model, non-significant regression coefficients were removed and initially unforeseen covariances were incorporated. New relationships, even when suggested by the AMOS™ modifications report, were only added in the case a theoretical argument was presented that warranted their inclusion. Thus, besides the variables removed in the CFA, it was necessary to relocate the relationships between the constructs. Checking the modifications suggested by AMOS™, it was

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deemed advisable to adopt the following covariance between the constructs, in addition to those adopted in the analysis of individual constructs:

- Creative and unpopular choice counter-conformity, because these two constructs are closely linked, with a reciprocal relationship of +42. This relationship shows that people who make creative choices probably make unpopular choices, the reverse is also true, i.e., unpopular choices are likely to influence creative choices;
- Creative choice counter-conformity and informational influence: these two constructs are closely linked, with an inverse relationship –29; therefore, the errors of these measures are related. This shows that consumers who make creative choices do not seek information from other people regarding innovation in the designs of football boots, the opposite is also true, consumers who seek information from other people do not make creative choices;
- Utilitarian value and informational influence: the influence of other people on the consumption of football boots probably helps the consumer to better understand the product or brand they are buying and thus better identify the tangible and functional attributes. The relationship identified here was +13;

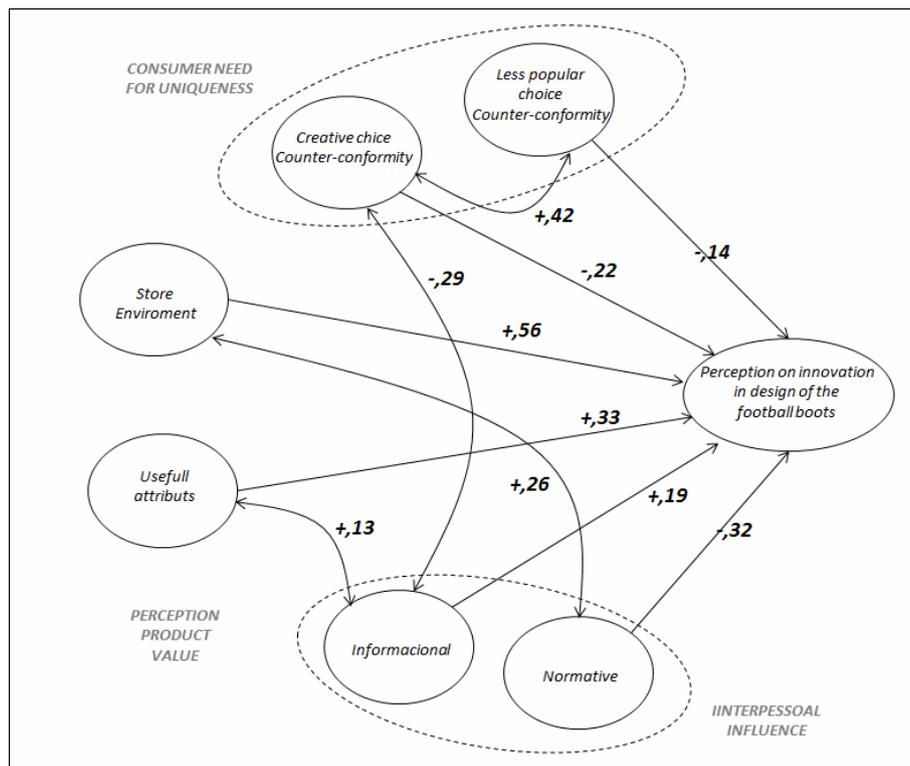


Figure 2. Integrated model

• Store Environment and normative influence: these two constructs are closely linked, with a reciprocal relationship of +26. This relationship shows that consumers who decide in accordance with the expectations of others tend to have the same opinion about the store environment.

After the removal of the non-significant ratio and the insertion of the suggested covariances, the final model presented the goodness of fit indexes shown in Table 3. The Standard Deviation and the Z test were significant. The integrated model of the factors that lead to the perception of innovation in the designs of football boots is shown in Figure 2.

As shown in Table 3, the ratio Chi-squared/degrees of liberty reached 2.0781, within the limit considered acceptable by the authors Kline (1998) and Hair et al. (1999). Both the other absolute measures of adjustment and the comparative measurements were within the desirable limits, indicating a good fit of the model. This demonstrates that the removal of non-significant relationships and the inclusion of covariance allowed a substantial improvement in the values of adjustment when compared to the model proposed.

Table 3

Goodness of fit index of the theoretical model

Index	Final Analysis
Degrees of liberty	435
Level of Probability	0.000
RFI - Relative Fit Index	0.971
CFI - Comparative Fit Index	0.989
NFI - Normed Fit Index	0.911
IFI - Incremental Fit Index	0.919
TLI - Tucker-Lewis Index	0.963
RMSEA - Root Mean Squared Error of Approximation	0.05

5. Discussion of the results

Analysis of the model presented in table 4 and figure 2 shows that ‘store environment’ is the variable that has the greatest impact on the perception of innovation in the designs of football boots. This effect is probably seen due to the structure of the stores that sell the football boots. Shops specializing in sporting goods display different brands and models of football boots on their shelves and display cases, which facilitate the comparison of innovations through the exposure of the products or the assistance of sales staff. This allows the consumer to acquire greater knowledge of the innovations in the football boots available on the market.

The ‘utilitarian value’ also had a positive, although moderate, effect on the perception of innovation in the designs of football boots. Confirmation of this

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hypothesis corroborates the traditional studies from Hirschman and Holbrook (1982), Keller (1993) and Liang and Wang (2004) who state that the consumer is influenced by utilitarian or functional attributes. This confirmation is likely due to the various brands and models of boots that provide several performance-enhancing innovations, such as more power, precision, stability, grip and cushioning. Thus, the research shows that the functional attributes are associated with the perception of innovations in the football boots consumed in the sample.

With respect to the ‘hedonic value’, the hypothesis, which stated that the expression of the emotional aspects at the time of purchase makes consumers perceive innovation in designs of football boots, cannot be measured because the field research failed to a relationship between these items. Thus, in the model it is not possible to statistically measure if the perception of hedonic value has a positive effect on the perception of innovation in designs of football boots.

Table 4

Evaluation of the hypothetical structural relations

Hypothesis	Hypothetical effect	Observed effect	Result obtained
H1a: Avoiding similarity has a negative effect on the perception of innovation.	Negative	Null	No verify
H1b: Unpopular choices have a negative effect on the perception of innovation.	Negative	Weak Negative	Confirmed
H1c: Creative choices have a negative effect on the perception of innovation.	Negative	Moderate Negative	Confirmed
H2a: Store environment has a positive effect on the perception of innovation.	Positive	Strong Positive	Confirmed
H3a: Hedonic value has a positive effect on the perception of innovation.	Positive	Null	No verify
H3b: Utilitarian value has a positive effect on the perception of innovation.	Positive	Moderate Positive	Confirmed
H4a: Informational interpersonal influence has a positive effect on the perception of innovation	Positive	Weak Positive	Confirmed
H4b: Normative interpersonal influence has a positive effect on the perception of innovation.	Positive	Moderate Negative	No verify

Regarding the relationship between ‘uniqueness’ and ‘the perception of innovation’, two hypotheses were accepted and one rejected. The presence of any relationship between the consumption of people who avoid similarity and the perception of innovation was rejected. Thus, it cannot be said that consumers who avoid similarity do not perceive innovation in the designs of football boots because no evidence was found in the field research to support this hypothesis.

However, it was found that consumers who make creative choices do not usually perceive innovation in the designs of football boots, because a moderate negative correlation was found. This fact can be explained by the consumption habits of those people who do not seek something similar to someone else and therefore adopt a strategy of seeking creative alternatives, different from the products that are in fashion. To justify this argument one may mention that the football boots sold today are manufactured on a large scale and distributed equally to everybody with the same technologies. Thus, consumers seeking creative choices are not likely to identify with models that are on the market and it is these products that include the current innovations. Thus, creative choices make it impossible to perceive innovation in football boots.

Also in the field of consumer perceived 'uniqueness', it can be seen that those consumers who make unpopular choices tend not to perceive innovation in the designs of football boots. This correlation was negative, although weak, yet corroborates the findings of Tian et al. (2001) who mention that these consumers are looking for new brands and even unpopular products in order to foster the need for uniqueness'. By choosing this consumption option, these consumers are unable to assimilate the innovations in football boots on the market.

In the case of ratio of interpersonal consumption to the questions involving 'informational influence' there was a weak positive effect on the perception of innovation in the designs of football boots, confirming the hypothesis suggesting that consumers seeking information about products or brands from close acquaintances are more likely to perceive innovations in the designs of football boots. The explanation for the confirmation of this hypothesis is probably associated with interpersonal relationships that generate information about the innovations in football boots, and this fact leads to greater awareness by the consumer, since information about the innovations is disseminated within his social group, probably in the place where he practices the sport.

Contrary to the theoretical base, the normative questions indicate that consumers who tend to decide in accordance with the expectations of others are more likely to perceive innovation in the designs of football boots. Normative influence produces a moderately negative effect on the perception of innovation. The rejection of this hypothesis suggests that normative influence of groups is not conducive to the perception of innovation. This may be due to the fact that consumers seek, as mentioned in other hypotheses in this paper, uniqueness and are averse to some opinions of the group. This finding does not corroborate the results of the classic studies of Bearden and Etzel (1982) and Bearden et al. (1989) which state that individuals are influenced by reference groups and may modify their purchasing decisions due to the interference of others.

In addition to the relationships hypothesized based on the theory, another four came to be suggested in the course of developing the new model. The one with the highest ratio was that which indicates that 'creative choice' was positively

related with ‘unpopular choice’, i.e. these two ratios are closely associated with the perception of innovation in football boots. In theory, this effect can be accepted due to the fact that both categories are part of the need for uniqueness scale, as mentioned by Tian et al. (2001).

Another additional relationship, though in this case negative, was that between ‘creative choice’ and ‘informational interpersonal influence’. This relationship can also be understood within the theory, because it highlights the relationship between the scales of ‘uniqueness’ and interpersonal influences. The results show that it is likely the consumers seeking creative choices do not receive informational influences from other groups when they are consuming football boots, with the opposite also being true.

Regarding ‘store environment’ a positive correlation was added to the normative influences, indicating that interpersonal influences such as attitudes, norms, values, aspirations and buying behaviour influence the choice, the opposite also being true. This hypothesis can be understood, because the retail stores in which the innovations in football boots are found are intended for a specific audience that consumes sporting goods, i.e., consumers who frequent this type of store share similar attitudes, norms, values, aspirations and shopping behaviour.

Finally, a positive relationship was added between ‘utilitarian value’ and ‘informational influences’. This relationship demonstrates that consumers use information to increase their interpersonal knowledge regarding the utilitarian attributes of the product in order to enhance the buying decision, with the opposite also being true.

6. Final remarks

This paper examines the antecedents that influence the perception of innovation in the designs of football boots. Based on the proposed theoretical framework, eight constructs were evaluated using the SEM technique and based on the adjustment to the theoretical model, eight hypotheses were analysed. The results indicate that the perception of innovation in the designs of football boots is influenced by these six constructs (unpopular choice, creative choice, store environment, utilitarian attributes, informational and normative influences).

The results only partly confirm the relationships contained in the original model and it is suggested that in order to enhance its applicability of the model, it is essential that the latent variables (‘hedonic attributes’ and ‘need for uniqueness’ that ‘avoid similarity’) be reviewed. The present study provides, as a theoretical and empirical basis, a model applied to the factors that influence the perception of innovation in the designs of football boots available on the market, thereby unifying the understanding of the functional relationships related to the listed constructs. Although the study provides a partial view of the respondents and of a likely bias the analysis of quantitative methods, it is believed that one of its greatest contributions lies

in the proposed junction of the constructs found in isolation in the work of Bearden et al. (1989); Chitturi et al. (2008); Deutsch and Harold (1955); De Wulf and Waterschoot (1999); Hirschman and Holbrook (1982); Jin and Kim (2001); Kaplan and Miller (1987); Lascau et al., 1995; Liang and Wang (2004); Lynn and Snyder (2002); Mäenpää et al. (2006); Netemeyer et al. (1992); Novemsky and Ratner (2003); Park and Lessing (1977); Ramanathan and Menon (2006); Schifferstein and Blok (2002); Sherman et al. (1997); Sinha and Banerjee (2004); Snyder (1993); Tian et al. (2001) and Veryzer and Wesley (1998). Establishing, based on this positioning, the possibility of a deeper understanding of the perception of innovation in football boots on the part of consumers.

Thus, it is believed that the findings are relevant both for scholars and for organizations. For the former, it contributes to the theoretical development of the field of research in sports product innovation by providing insights into the relationship between consumption and the perception of innovation in football boots. Note that this is a major challenge to the academic community because it is a new and developing field that lacks empirical studies. For organizations, the model can be useful for the brands that work with football boots, when developing their strategies. It may also be useful for sports retailers, as it may guide their strategies regarding the display of football boots.

The contributions arising from the model developed herein should be considered in relation to its limitations, because there was no intention to generalize the results but rather to encourage reflection about the relationship between the perception of innovation and the consumption of football boots. Further investigations are recommended in order to overcome the limitations of this study, among which is the fact it was restricted to consumers from Porto Alegre, Brazil. With regards to future studies, it is suggested in other investigations be carried out in other cities or countries, so that comparisons could be made considering specific local conditions, as well as incorporating other variables that may represent an advance in the construction of the model. Further study is also recommended of the new relationships found in the final model: (a) unpopular choice and creative choice, (b) creative choice and informational interpersonal influence, (c) store environment and normative influences, and (d) utilitarian value and informational influences.

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About the authors

Wagner Júnior LADEIRA is Marketing professor in UNISINOS – Universidade do Vale do Rio dos Sinos – Brasil. He holds a PhD in business administration from UFRGS-Brazil. The main research topics of interest are related to quantitative research, marketing and technology management.

Rafael Mendes LÜBECK. He holds a Master in Business Administration from UFSM (Federal University of Santa Maria – Brazil). Currently he is professor of marketing and researcher in UFSM in topics like consumer behavior and innovation.

Clécio Falcão ARAUJO is Research Assistant at PUCRS. Prior positions include several corporate works in large Brazilian companies. Currently, he is developing several researches in industrial marketing and strategy. He is a Master student in Business Administration, Pontificia University Católica do Rio Grande do Sul – PUCRS.