

# Language, Ethnical Identity and Consumer Behavior: A Cross-Cultural Study of Marketing Communication in the Region FVG

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## Abstract

In the multiethnic EU contest, the European Institutions encourage all citizens to be multilingual by learning at least two languages in addition to their mother tongue, including the local languages to maintain alive their cultural backgrounds and preserve their ethnic identity. The objective of this study is to verify whether the local language used in marketing communication strategies could significantly affect the consumers' preferences for food product and their decisions. The theoretical framework is given by the consumer motivational approach that enlarges the traditional consumer theory including other determinants of consumers decisions as the language and ethnicity; the empirical analysis is performed with the multivariate conjoint analysis to evaluate the influence of the cross cultural influence in consumer's choice. A number of students from the university of Udine have been interviewed with a questionnaire focusing on preferences for a simulated packed sandwich product distributed by vendor machine inside the University space to test the influence of local language. The results suggest some reactions to the messages reported by package in different languages depending on the level of language knowledge and suggest their use for potential demand segmentation to generate niche markets. These results can be generalized to the many regional markets in the EU where the identity construct evocated by the local language can be used in market communication strategies to increase the local food demand and customization.

Keywords: *food, consumer behavior, local languages, communication, involvement, conjoint analysis.*

## 1 Introduction

Languages in the EU and strategies of market communication: The States of the EU are becoming more tolerant with the local language as a result of reinforced pressure versus minority linguistic groups who demand institutionalized language protection for an adequate representation of their language in the media, education, and official communication to preserve their cultural identity values. Languages promote the development of the citizen status and contribute to a true core value of the ethnic values and historic heritage (Schmid, 2008; Luna and Perracchio, 2002; Laroche et al, 1998; Askegaard and Madsen, 1995, Rosa and Sillani, 2001).

The Council of Europe (CoE), and the Organization for Security and Cooperation in Europe (OSCE) have committed themselves to protect the idioms, encouraging the EU citizens to become multilingual by speaking at least two languages in addition to their mother tongue (Glazer, N., Moynihan, 1970). In Italy the language situation is even more diversified: actually in every region is practiced a local language that usually is a variant of the old latin, while in the bordering regions the local languages are breed with the ones of the bordering countries.

In the EU are practiced 24 official languages, 38 recognized minority languages and many variants: France (Breton and Occitan), Belgium (Vallon and Flemish), UK and Ireland (Scottish, Gaelic, Cornish, Irish, Welsh), Spain (Catalan, Galician, Basque, Aragonese), Italy (Occitan in Piedmont and Calabria; the Catalan in Alghero, the German in Alto Adige, the Friulian, Slovenian and German in Friuli and other regional languages.

In this melting pot contest the local language strengthen the ethnic identity of groups of peoples in a non-dominant position in the State, whose members, being nationals of the state, possess common ethnic, religious or linguistic traits and show, if only implicitly, a sense of solidarity, directed to preserve their ethnicity built on culture and historical background, religion and club affiliation, endogamy, food preferences, traditions, celebrations and rituals. (Rotunno and Goldrick, 1982;). In table 1 are reported the traits of ethnicity classified in external and internal.

**Table1.**  
Internal/external traits of the ethnicity

External	Internal
Local language used in private and public events	Cognitive: subjective knowledge of group values
Traditions, habits, rituals, ceremonies	Heritage and history
Participation in ethnic network and organization	Stereotypes
Participation in collective rituals,	Moral obligation and commitment versus the group
Common religion	Affective: attachment to a given group
Celebrations of marriage inside the group (endogamy)	Education
Preparation of traditional food and selected ingredients	Values

Until recently the ethnicity was considered to be a slowly dissolving artefact due to the rapid assimilation of minority groups in the dominant culture (Glazer and Moynihan, 1970). This view typified the opinion broadly diffused in United States of the homologation power of the anglo-saxone culture (WASP) and disappearance of ethnical, local cultures and languages. (Berry and Laponce, 1994; Laroche et al, 1998; Schmidt, 2008). However, the opening of the Canadian policy toward multiculturalism and growth in the US of the Hispanic community in economic and numeric representativeness have actively promoted the revival of ethnic distinctiveness. (Caltabiano, 1984)

Ethnic identity represents but one aspect of a broader multicultural process intimated by such terms as “culture change” (Keefe and Padilla, 1987) or “ethnic change” (Laroche et al., 1998). The second facet of this process is the acculturation, reflecting the acquisition of traits of a dominant culture which, in the specific contest of this work is represented by the Friulan as a local language linking to ethnic traits. Considerable interest and attention has been given to ethnic identity both as a construct in its own right (Phinney, 1990) and as a correlate/determinant of a wide array of phenomena including those related to marketing (Hirschman, 1981; Faber et al., 1987).

Ethnicity is a multidimensional construct: many authors have stressed the primacy of language in the process of maintaining one’s culture of origin (Keefe and Padilla, 1987; Rosenthal and Hrynevich, 1985). This complexity partly rests on the way its aspects impact on food habits: it is quite apparent that acculturation and ethnic identification are related to consumption as the product attribute evaluation is congruent with one’s level of ethnic identity and/or acculturation (Laroche et al, 1998; Almli et al, 2011; Rotunno et al.,1982 ).

Local language plays nowadays a central role in the formation and maintenance of ethnical identity, is legitimated in and through education, play a key role in establishing and maintaining the cultural and linguistic shape of this community-nation. (Laroche et al, 1998). The changing cultural attitude for the ethnic values of minorities explain the growing interest for strategies of marketing communications using “non-conventional (non-official) local languages diffused in many EU regions based on the recognized association of food choice with the belonging to a community where the language is a symbolic mean to transmit emotional cues of identity values. (Christian et al., 1976, Driedger, 1975).

The use of language in marketing has been tested for its role in the consumer involvement construct (Rodriguez-Santos & Grunnert,2013); search, perception and processing information (Bloch, 1982; Block and Riching, 1983 Rothschild et al, 1979; Celsi and Olson, 1988); complexity and extensiveness of purchase decision process (Houston and Rothschild, 1978; Engel and Blackwell, 1982); attributed importance and brand loyalty; and opinion leadership (Lastovicka and Gardner, 1979).

Language influence the consumer involvement that is the heightened state of awareness that motivates to seek out, attend to, and think about product information prior to purchase. The involvement is framed within a broadly concept of motivation, defined a state of arousal experienced by the individual with perception of stimuli (cues) generated by the attributes of the product and forming part of the explanatory processes of attitude changes (Sherif and Hovland,1961; Petty and Cacioppo, 1981a), Laurent and Kapferer (1985).

The language changes the personal perception of certain intrinsic attributes related to the fundamental individual's values as the inclusion into an ethnic group revealing characteristics of the stimulus that are either novel to the individual or highlight previously unperceived associations between the stimulus and the values of the individual. (Luna and Perracchio, 2002; Verbeke, 2005)).

There are three dimensions of the involvement: personal, product, situation

Personal: contribute to the involvement: self-concept, needs, and values are the three personal factors that influence the extent of consumer involvement in a product or service. The more product image, the value symbolism inherent in it and the needs it serves are fitting together with the consumer self- image, values and needs, the more likely the consumer is to feel involved in it.

Product: the pleasure one gets by using a product or service Some products are a greater source of pleasure to the consumer than others. Tea and coffee have a higher level of hedonic (pleasure) value compared to, say household cleaners. Hence the involvement increases when a product gains public attention. A product consumed in public, is an exhibition of status demanding higher involvement.

Situational: The situation in which the product is brought or used can generate emotional involvement. The reason for purchase or purchase occasion affects involvement, social pressure can significantly increase involvement. One is likely to be more self conscious about the products and brands one looks at when shopping with friends than when shopping alone. The need to make a fast decision also influences involvement. The involvement is higher when there are social implications in the purchasing; thus involvement may be from outside the individual, as with situational involvement or from within the individual as with enduring involvement. It can be induced by a host of personal-product-and situation related factors, many of which can be controlled by the marketer.

Although we aim to identify the ultimate bases of the state of motivation represented by these variables, since we consider that in the dimensions proposed there is a mix of causes (the perceived importance), determining factors of these causes (the symbolic and hedonic values, that could be associated with the language stimuli), and other related concepts (community, identity, tradition). Then the analysis of the relation between the language and attributes will provide information and contribute to explain the motivation of consumer choice. (Rodriguez-Santos & Grunnert,2013)

This research is dedicated to explore the role of local language in market communication by experimenting the relation between word/expression used, their impact on consumers' preferences for food attributes and utility of a product profile as the expression of individual's cultural value system developed in a specific cultural context<sup>1</sup>. (Hersleth et al, 2013; Houghton et al, 2006; Le Mée,2006; Rosa and Nassivera, 2013).

## **2 Language and marketing communication**

It is well known that food preferences and description of sensory food properties vary across cultures. Considering the global character of today's food market and relative opportunities for producers, one important issue is the cross-cultural comparisons of the perception of specific food in order to define strategies for product development and

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<sup>1</sup> With the contributes of marketing, sociology, psychology, it is possible to create a optimal contest in which consumers form their attitudes and make decisions to purchase. In the consumer-behavior it is important to underline the influenced of immaterial factors as personality, perception, cultural and hedonic values and beliefs. For marketing strategies, these influences are studied in the context of socio-demographics, which includes language, ethnicity, age, status, size of family, income, education, social relation and employment. Read more: [http://www.ehow.com/about\\_5162253\\_definition-consumer-behavior.html#ixzz2o21HWFNA](http://www.ehow.com/about_5162253_definition-consumer-behavior.html#ixzz2o21HWFNA)

marketing strategies aimed at penetrating new markets and demand segmentation. Within this framework, cross-cultural studies on perception and verbalization of sensory properties of food might play an important role to optimize the communication of the sensory attributes of the products. The descriptors used in communicating sensory properties are important to motivate the consumer to the choice: "if the words or expressions describing the product quality are not properly used in market communication, the attributes of the quality construct particularly those immaterial ones linked to the territory, culture and identity, are not sufficiently understood the interactions between local food culture and consumer choices are weak with low impact on market strategies (Hersleth et al., 2013).

The market segmentation incorporates the cultural identity in a more comprehensive approach that explain how those manifestations influence the cognition, and affect the behavior of consumers. (Herleth, 2013). A well known scheme is the mean-chain linking the symbols (as ethnicity, community, identity) transmitted by language to influence the preferences and decision to buy. It should be noted that the marketing communication strategy can be a powerful tool to shift or reinforce these symbolic meaning of the culture. (McCracken, 1986). Hence, a firm interested in transforming a local food, likely the ham into a symbol for the values "natural living" and "understated success" which the brand image will link to values with the local language used as a vector to transmit these values. (Luna, et al, 2001; Sillani and Rosa, 2003). The involvement is created by the perception of emotional cues generated by sensory stimulus of the product and amplified by marketing strategies (e.g., promotions, communication, advertising using specific media) for the associations of values with sensorial stimuli. (Grunnert and Grunnert, 1989; Brunsø, et al,1999)

In the literature the way the bilingual consumer decodes the meanings of an object presented in two languages hypothesize two cases: a) the consumer is indifferent to the language used to diffuse the message. Hence the words "Rosso" and "Red" remind a color of a given intensity in a chromatic scale and the rank of preferences won't change whatever the language used; b) the consumer is not indifferent then the words Rosso" and "Red" stimulate different emotional cues and associations. (Fabbro,2002)

Cognition includes any construct or process that refers to memory structures or self-construal Marketers' actions serve as a vehicle to transfer meanings or values from the culturally constituted world to consumer goods (McCracken, 1986, 1988), so marketing communications are represented in the model as a moderator of the effect of culture on consumer behavior. At the same time, marketing communications may also affect a culture's manifestations through advertising. Culture influences behavior through its manifestations: values, heroes, rituals, and symbols (Hofstede et al., 2010). These are the forms in which culturally-determined knowledge is stored and expressed.

The consumer behavioral scheme in Figure 1 is drawn from work in consumer research of the American Marketing Association that defines the consumer behavior as "the dynamic interaction of affect and cognition, behavior, and the environment by which human beings conduct the exchange aspects of their lives"

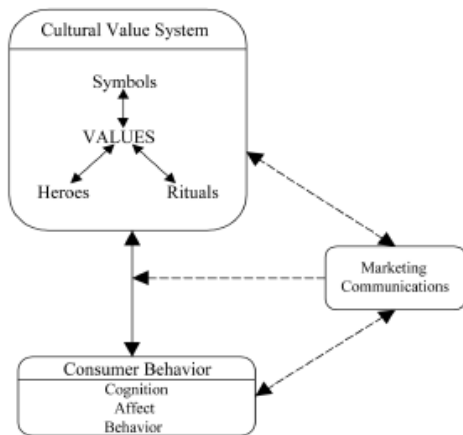


Figure 1.  
A model of the interaction of culture and consumer behavior

Each ethnic group possesses different cultural manifestations that represent values on which is built the solidity of the intergroup relations. A value as a centrally held, enduring belief guides actions and judgments across specific situations

and beyond immediate goals to more ultimate end-states of existence". There are different taxonomies of values: with Rokeach's values implies a differentiation between preferred end states of being (terminal values) and preferred modes of behavior or means to achieve end states (instrumental values).

**Symbols.** Symbols are a broad category of processes and objects that carry a meaning that is specific to a particular group of people (Geertz, 1973, p. 89). Hence, a society's symbols may not exist in different cultures, or their meaning may be different. Language is a set of symbols, as are different gestures, pictures, or objects. The symbols most frequently studied by consumer researchers are language (Sherry and Camargo, 1987) and consumer products. Several authors have examined the symbolic nature of products and consumption. We can infer from this body of research that product symbolism is generated at the societal level (Solomon, 1983; Soika et al, 1995).

Cultural values, expressed in society's perceptions of reality and beliefs of what is desirable, are transferred to products through advertising and communication (Belk, 1985). These products then become charged with cultural meaning. For example, a pair of sneakers can be elevated to a cultural symbol for the value "a sense of accomplishment". Individuals, in their efforts to define their social self, are moved to consume the products which are now charged with symbols (Durgee, 1986). Cultural categories are formed according to cultural principles, or values. Similarly, also describes how mental schemata are influenced by culture. Thus, the anthropological view of culture also recognizes that cognitive constructs (i.e. categories) are determined by cultural manifestations (i.e. values). (D'Andrade (1992; Tu et al. 2010)

**Values and affect.** Numerous studies have examined the role of cultural values on the attitude formation process. We can distinguish between advertising studies and consumer behavior studies. Affect toward the ad and/or product represents two of the most important gauges of success in advertising. Therefore, a number of advertising researchers have examined affective variables in cross-cultural advertising. In particular, several studies have attempted to ascertain the role of cultural values on ad-elicited attitudes.

Hence, symbols generally express cultural values. Through consumption rituals, consumer goods become symbols of cultural values. At the same time, symbols reinforce values, or may even shift them. For example, if a specific cheese is seen as a symbol for wealth and repeated advertising associates wealth with a desirable end state, values may shift in certain societal groups toward considering wealth as a terminal value.

The nature of the relationship between language-as-a-symbol and values has been subject to debate. Some authors suggest that language influences values, and others propose that cultural values determine the form of languages. It is possible that the relationship is bidirectional. For example, cultural values may motivate the creation of words that may not exist in other cultures. At the same time, language may give origin to values that are literally 'unthinkable' in other cultures because of a lack of adequate terms to represent them (Pinker, 1994).

Consumer ethnocentrism is a construct often studied by cross-cultural researchers. The construct, as operationalized by Shimp and Sharma (1987), could be viewed as an instrumental value (Rokeach, 1973). In their study they found that consumers' ethnocentrism determines their perceptions of domestic versus foreign products (cognition), as well as their attitudes and behavior. A good example is offered by the inclusion of Parmigiano reggiano in the hamburger sold in Italy by Mc Donald which promotion focusses the values of tradition taste and culture. Rosa, 2007)

Also examining subcultural differences in the USA, Shim and Gehrt (1996) found that Whites, Native Americans, and Hispanics tended to approach shopping with orientations consistent with the values predominant in their respective groups. Altogether, values seem to be the manifestation of culture most often studied by researchers, which confirms that values are a central construct in an individual's cultural identity. In other words, values may be the most important of the four manifestations of culture (Hofstede, 1997)

The use of local language in advertising has experienced increased attention from researchers: Luna and Peracchio (1999) extended the theories developed by researchers in psycholinguistics to advertising targeting bilingual consumers. Schmitt et al. (1994) compare speakers of Chinese and English and the implications that structural differences in languages have for consumers' information processing and mental representations (e.g. whether visually or auditorily presented information is remembered better). Sherry and Camargo (1987) examined the effect of language and symbol on consumers' cognition and conclude that mixed-language (Japanese-English) ads in communicate certain values that single-language ads could not express.

Symbols and affect: Koslow et al. (1994) use a sociolinguistic approach in their study of advertising to explain US Hispanics behavior. The authors use accommodation theory and argue that Hispanic consumers' perception of the advertiser's sensitivity toward their culture mediates language effects on attitudes. Positive responses to ads are evoked if they include at least some portions in the Spanish language. Pan and Schmitt (1996) with a cognitive approach show that a logograph based writing system (i.e. Chinese writing) is active in promoting visual processing, while alphabetic systems promote aural processing during attitude formation. Following a psycholinguistics approach, Dolinsky and Feinberg (1986) examine language and how consumers from bilingual subcultures process information in their first versus their second language. They find that second language processing leads to information overload and suboptimal decisions more easily than first language processing. Schmitt and Zhang's (1998) study suggests that language shapes some mental schemata, which may lead to different choices across cultures/languages.

### 3 Theory

The theoretical framework uses the random utility theory proposed by Lancaster (1966), that considers a product like a bundle of attributes and consumer tends to maximize the overall utility given by the sum of partial utility of a single attributes subject to budget constraint. The combination of part-worth utility values for each level of the product attribute is summed up to give the total utility for the product. The part-worth utility estimates are formed by combinations of attributes so that the total utility equation is:

$$U_j = f(X_{1j}, X_{2j}, \dots, X_{nj}; Z_1, Z_2, \dots, Z_n; \Theta_n) + e, \quad (1)$$

Ut is the total utility that an individual obtain from product j, while X<sub>ij</sub> (for i =1..n) is the ith attribute level that is the preference or partial utility for product j, Z represents the socioeconomic profile for each individual, Θ, is a vector of parameter estimates for each attribute level, and e is the error term. Estimated part-worth of the product attributes are called main effect of variables X. The estimates require the utility of a product stated by the preferences of their attributes, assumed to be separable and additive, for example, color, flavour, taste, and others (Furlan and Martone, 2011; Green et al. , 2001, Gustafsson et al, 2001). The preferences assigned to a measurable level of the attribute, for example the level "Red" color, represent the utility assigned by the consumer. In addition to the utility levels, the conjoint analysis estimates the relative importance of the attributes in the product profile that is the difference between the maximum utility and usefulness of its minimum levels expressed in percent of the sum of the differences of all the product's attributes. The relative importance, therefore, is a measure of the sensitiveness of the consumer to the attribute and, in the case of the language, a measure of the intensity of consumer's emotional response to the effectiveness of language for describing the attribute.

### 4 Methodology

The Conjoint analysis (CA) is the multivariate statistical method used to estimate the product utility not yet on the market by combining attributes and levels, that best fit with the consumer tastes and wishes. This analysis is addressed to evaluate the language importance for the consumer's preferences by improving the perceptions of food attributes, to satisfy the psycho-functional consumer needs. Here it is proposed a method to evaluate the consumer's perceptions of messages that beside equivalent in meaning are encoded in different languages. (Swahn, 2010)..

The CA, allows to investigate the consumer involvement in purchasing a product by estimating the usefulness and importance of single attributes when submitting the product to the judgment of the respondents compared with a number of similar alternative product profiles (Claret et al ,2012; Ennekinng et al, 2007; Green et al, 1990; Lancaster, 1966; Saito et al, 2013). CA will go deeper into the structure of the consumer's preferences by decomposing the utility of a single attribute (e.g., part-worths, importance weights, ideal points) using alternatives product profiles. CA allows to decompose the product utility to establish the relative utility importance of a single product's attribute including physical and psychological ones, according with the consumer preferences (highlighted by preference parameters, relative weights and other, see Solomon, 1983). The information of the inference are used to select among alternative product profiles that simultaneously vary across the most preferred attributes (Green & Wind, 1975; Green & Srinivasan, 1990).

Being this research directed to explore more insight into the psychological motivation of the consumer behavior, the laddering technique is used in selecting the attributes by eliciting goals and underlying values, during early stages of user experience research. Using the laddering method in consumer and organizational research, marketing practitioners have conceived and refined procedures for describing the links between customers' values and their overall purchasing behavior. (Lotong et al., 2002)

The Means End Chain (MEC) theory, proposed by Reynold and Gutman (1988), provides both a framework for capturing qualitative laddering research data in the consumer space and a model for assessing consumer preferences for attributes and behaviors. This theory proposes that consumer motivation to choose a product can only be understood in terms of the hierarchical linkages between attributes, consequences and values. Other researchers have suggested a much more immediate impact of values on motivation. A hierarchical cognitive structure is proposed to be present in the consumer's sub-conscious, in which the motivation to consume is derived from cognitive linkages between the attributes of the product, the consequences of consumption, and the corresponding instrumentality of achieving an individual's values. (Sullivan and Rose, 2006)

CA will measure the trade-offs made by a respondent interviewed with a questionnaire when choosing from a total of alternative profiles in a product. The full-profile method, using rating scales or rank orders with part-worths estimated by least squares regression, represents the most common type of application. of the full-profile method is its ability to measure overall preference judgments using behaviorally oriented constructs such as intentions to buy, likelihood of trial, language role, ethnic features and so on. The elicitation of constructs from respondents requires that each option be described on all the attributes, i.e., the full profile approach.) review the literature on various ways of incorporating environmental attribute correlations in the construction of stimulus sets so as to increase the realism of the task. The utility of a message encoded in a specific language reflects its contribution to the highest product utility perception. (Hawley, 2009)

The orthogonal matrix (or fractional factorial design), reduces the attribute combinations to a small set of product profiles that is representative of the universe of possible combinations that are allowed to appear together in full-profile descriptions. It should be added, however, that this technique also provides for the creation of some control cards not used then to estimate the coefficients related to each attribute, but to check the statistical validity of these estimates.

Stimulus presentation: Pictorial images is virtually indispensable in conjoint studies associated with appearance and aesthetics, such as package design and product styling. Moreover, conjoint methodology is applied with physical products as stimuli (here a package of the ham sandwich). These conjoint methods are being adapted to give a type of discrete-level analog to response surface modeling (Moskowitz, Stanley and Chandler 1977).

**Table 2.**  
Steps in CA and alternative methods to determine the importance of attributes

Step	Alternative Methods
1. Preference model	Vector model, ideal point model, part-worth function, mixed model.
	Full profile, two-attribute-at-a-time (trade-off tables).
2. Data collection method	Fractional factorial design, random sampling from a multivariate distribution, Pareto-optimal designs.
3. Stimulus set construction	Verbal description (multiple cue stimulus card), paragraph description, pictorial or three-dimensional model representation,
4 Stimulus presentation	Rating scale, rank order, paired comparisons, constant sum, paired comparisons, graded paired comparisons, category assignment.
5 - Measurement scale for the dependent variable	Metric methods (multiple regression); non parametric methods ( <b>LINMAF</b> , <b>MOSANOVA</b> , <b>PREFMAP</b> , Johnson's nonmetric algorithm); choice probability based methods
6 - Estimation method	(LOGIT; PROBIT



#### Characteristics of Consumer Choice Simulators (Cont.)

- o Inclusion of price and cost parameters
- o Brand switching matrices
- o Derived attribute-level importances (based on choice data)

#### Consumer characteristics

- o Respondent background data for market segment summaries
- o Respondent importance weights
- o Respondent perceptual distributions
- o Idiosyncratic status-quo product Utilities
- o Individual output file (for additional analyses)

#### Sensitivity features

- o Individual-level runs through single attributes
- o Flexibility for fixing attribute levels at user-preset values (in all runs)

#### Cosmetic features

- o Menu driven
- o Graphics output

File charts and histograms of market share; part-worth graphs

Averaged part-worths for total sample and segments

## 5 Empirical analysis: definition of the product profile

### 5.1 Attributes

The first step in the analysis is to define the list of attributes relevant to explore the consumers' preferences and their description with words appropriate to the interviewed. This is a very sensitive task because the literal translation of the same word in different languages could have different meanings and associations according with individual's cultural backgrounds. Then the language power in market segmentation will depend on the ability of cross-cultural interpretation of the different word/expression (function, property, origin, arousal) used as descriptor of attributes of product quality. If the proper words used do not correspond to the meaning of attributes intended by consumers, the desired quality information is not adequately decoded and communication will be ineffective (Swahn et al., 2010).

The conventional descriptive analysis is used to obtain a descriptive vocabulary of the product, sufficiently similar in different languages to capture the meaning of cross cultural differences. This previous analysis has been done with the collaboration of trained experts, panelists and consumers to elicit the descriptors of the attributes to find an adequate correspondence in different cultural contexts using FCP (free choice profiling) and RCP method (repertory grid method), see (Hersleth et al., 2013; Andani et al, 2001).

Five attributes are finally selected for the analysis of the product (packed cured ham sandwich distributed by an automatic vendor machine): brand, AOP, eco-labels, shelf-life and price combined in the product that is..

The product profiles are reported in a schedule with various combination of attributes and levels to test the influence of local language. The schedule is submitted to a consumer panel formed by 318 respondents randomly recruited and selected from the population of students attending different faculties of the University of Udine.

1 – The brand is formulated with the expression “house of ham” and communicated in two languages: italian and friulian. The friulian expression “Cjase dal persut” is the name of an establishment of small dimension where the ham is stored cured with artisan methods. As well Cjase remind the familiar concept of home made product where food traditions are preserved and the place where consumption of ham has an impact on family relations.

2 - The AOP geographic denominations ham is an attribute with two levels: a – “Prosciutto San Daniele” is the regional prestigious cured ham made in the region Friuli; b) – “Prosciutto Parma” is the geographic AOP and in this contest is the national market competitor. The intrinsic quality of these two AOP products is comparable since the fabrication procedures imposed through the chain from selection of ham producers, pigs breed, seasoning period, quality evaluation and certification procedures are quite similar.

3 - The eco-label is a voluntary labeling system for consumer products that ensures a minimal environmental impact for the entire product life cycle from production to disposal in accordance with a sustainable development strategy. Eco-labels are generally established with specific organizations, which may be independent or institutional standards that establish the requirements to be satisfied for each product category. The attribute eco-label has these levels: absent or present with the following expressions: "we saved water and energy" reported in English, Italian and Friulian.

4 – The shelf life indicate the length of time spanning from packaging to deadline: during this time it can be reasonably assumed that the hygienic and organoleptic properties of the food product can be traced back to those of the newly packaged product or in any case in which the loss of "quality" is considered tolerable. The shelf-life is a function of the composition of the product, method of conservation, environmental parameters.

5 – The price is conveying the notion of convenience: students who usually dispose of lower purchasing power will be requested to make an effort to compare the values of the ingredients of product quality including the immaterial ones given by the product origin and the language. Then the overall judgement about quality will affect their decisions and their choice will reveal the influence of cultural ethnic values transmitted by language. Then this attribute is appropriate to observe if decisions are made on the basis of utilitarian rather than psychological motivations.

**Table 3.**  
Attributes and levels selected for the experiment

Attributes	Levels
Brand	Casa del prosciutto; Cjase dal persut; (2).
AOP origin	Parma; San Daniele (2).
Ecolabel	Absent; risparmiato acqua ed energia; saved water and energy; A vin sparagnade aghe e energie (4)
Shelf life**	5; 7 days. (2)
Prezzo (€/panino)	1,20 €; 1,60 € (2)

\* Text yellow-gold on a color background of crude ham. reported the number of days between packaging and deadline.

\*\* The schedule

The equation of the product Utility is:

$$(2) U(\text{packed sandwich}) = \text{Const} + U(\text{Brand}) + U(\text{PProduct}) + U(\text{Ecolabel}) + U(\text{Shelf life}) + U(\text{Price})$$

The combination of attributes and levels gives 72 different product profiles. However, it is unrealistic to ask an individual to rate the combination of attributes with too many profiles or scenarios. A fractional factorial design is used to reduces the number of profiles to a manageable size and at the same time to ensure that there were no multi-collinearity problems among the profiles.

**Figure 2.** The Schedule used for the interview

### 5.2 Data collection procedure

The sample size is selected according with dimension and randomization<sup>2</sup>; the sample consisted of 318 respondents (drawn from different faculties) who were personally interviewed in the university facilities. Respondents, recruited on the basis of their frequency in purchasing similar products are 318, subdivided by gender: 51.4 % males and 48.6% females, aged between 19 and 27 years; the 60.3 % are Italian students resident in Friuli region, 37.1% are Italian not resident in Friuli, and 2.6% are foreigners. With regard to language proficiency: i) english, the 80,4 % declare they can understand and speak English, while this language is not understood by 3.5% of respondents; ii) friulian, the 40.8% are able to understand and speak Friulian, the 27.3 % understand but not speak the Friulian, the 31.9 do not understand the Friulian; iii) the 32.7% are not able to understand at least one of the three languages (Picco, 2009). Before starting the interview a short description is given in Italian about the type of product to be tested and testing procedure.

### 5.3 Preference order

The most preferred attribute is the ecolabel (30,19), followed by the brand, (21,48) the product (20,99), price (15,57) and shelf-life, (11,773).

**Table 4.**  
Average values of the preferences

Brand	21,48
Product origin	20,99
Ecolabel	30,19
Shelf life	11,77
Price	15,57
<b>Totale</b>	<b>100,00</b>

Before starting the CA it is controlled the strength of the model built: in Table 5 are reported the values obtained from the calculation of the coefficients Pearson's R and Kendall's  $\tau$ .

**Table 5.**  
Validation test for the estimated preferences

Test	Value	Sig.
R of Pearson	0,985	0,000
Tau of Kendall	0,950	0,000
Tau of Kendall for check	0,999	0,000

The correlation values between the preferences declared by the respondents and those estimated with the CA are high and significant (Pearson's R, 0.985 and 0.950 and Kendall's Tau, 0.999 for controls).

The table 6 reports the average values of the preference scores for attributes and levels: higher positive values indicate higher preference, the negative sign indicates a preference bottom of the product. The ranking is changed respect the previous order, according with perception of the level contribution to attribute utility

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<sup>2</sup> Green and Srinivasan suggest a minimum of 100 interviews enough to have reliable results

**Table 6** – Average values of preferences for attributes and levels

Attribute	levels	Utility value	Standard error
<b>Brand</b>	Italian	-0,31	0,95
	Italian + Colour	2,63	0,95
	Friulan	-1,37	0,95
	Friulan + Colour	-0,95	0,95
<b>Product origin</b>	San Daniele	6,11	0,55
	Parma	-6,11	0,55
<b>Ecolabel</b>	Absent	-4,31	0,95
	Italian	4,84	0,95
	English	-0,71	0,95
	Friulan	0,19	0,95
<b>Shelf-life</b>	5 days	-2,21	2,74
	7 days	-3,09	3,83
<b>Price</b>	1,2 €	-17,44	3,28
	1,6 €	-23,26	4,38
Costant		84,21	5,07

The table 6 suggest the following order of preferences for attributes:

- 1 constant (84,21)
- 2 product origin + San Daniele, (6,11)
- 3 ecolabel + italian (4,84)
- 4 brand + italian + color (2,63)
- 5 shelf-life 5 days (-2,21)
- 6 price. (-17,44)

## 6 Results description

### 6.1 Comment to the values of utility attributes

Constant: the highest value of constant (84,21) suggests that other factors not included in this analysis contribute to explain the utility value of the ham product.

Product origin: the San Daniele (6,11) is preferred to the Parma Ham (-6,11); the geographic location evokes ethnic value related to the landscape and nature of the region FVG. Despite Parma is appreciated for its intrinsic quality, is not transmitting the same identity value of San Daniele. For the market communication strategy using the local language for San Daniele could contribute to enlarge the market area and will have effect on demand segmentation.

Ecolabel: the appreciation of ecolabel, (4,84) is related to the Italian and suggests the increased consumer's awareness for the environment and health values which has gained importance in recent years. A limited importance is for the use of friulian (0,19) while English doesn't have impact on eco-label perception.

Brand: the friulian alone has the lowest utility value, followed by Italian alone; the combination Italian + color is ranked third in the preference (2,63) suggesting that the homologation strategies of the large distribution have also affected the local product perception. Most likely the use of Italian makes easier to perceive the product quality.

Color: red label is strengthening the perception of the brand and is the most important sensory component contributing to the product appearance by transmitting perception of freshness and tenderness. The importance of color for sensory perception of cured ham could be expected as differences in color are easy to be detected and described in general but could be complicated when one intends to describe precisely the ham product. Combined with Italian language in the brand attribute gives the higher score (2,63) compared with the combination friulian + color (-0,95).

Shelf life and price: are not evident the importance of these attributes. This result seems to indicate that for the friulians the preference order for the intangible attributes of identity related to the territory, geographic origin, environmental concern prevail on the those concrete attributes that commonly contribute to the perception of the physical quality.

## 6.2 Relative importance of attributes

These results are obtained from the OLS analysis that give information about the importance of attributes and levels using the preferences expressed by respondents based on utility score.

The division in groups is obtained with the estimation of utility for individual respondents, and these data are analyzed with the program Cluster two step that has selected six groups: the 1st group represents the 8% of the sample, the 2nd group, the 19%, the 3rd group, the 22%, the 4th group, the 12%, the 5th group, the 17% and the 6th group, the 22%.

In the following table are reported the preferences of each cluster for attributes

**Table 7.**  
Relative importance of attributes for each cluster

Cluster	Size	% of the total respondents	Brand		Product		Shelf-life		Ecolabel		Price	
			Mean	ST DEV	Mean	ST DEV	Mean	ST DEV	Mean	ST DEV	Mean	ST DEV
1	25	8,00%	8,5	5,97	66,98	15,33	5,02	5,046	10,76	7,8	8,74	9,17
2	60	19,30%	18,21	5,63	31,34	8,09	12,29	7,31	26,98	7,46	11,17	7,38
3	68	21,90%	16,21	7,66	10,39	8,06	11,84	7,08	25,25	11,72	36,3	13,64
4	37	11,90%	20,18	10,58	8,67	6,16	34,32	9,01	23,75	12,37	13,08	8,62
5	52	16,70%	20,76	6,72	10,68	7,25	6,55	5,39	53,6	8,36	8,41	6,17
6	69	22,20%	35,46	7,06	20,12	12,71	5,55	5,66	30,69	10,4	8,17	6,15
<b>Sample</b>	<b>311</b>	<b>100,00%</b>	<b>19,89</b>	<b>7,27</b>	<b>24,70</b>	<b>18,58</b>	<b>12,60</b>	<b>11,04</b>	<b>28,51</b>	<b>15,25</b>	<b>14,31</b>	<b>14,27</b>

The total value indicate that the ecolabel is the most important attribute (28,51), followed by the product, (24,7) brand (19,89), price (14,31) and shelf life (12,60). However, these preferences varies among the various groups. The relative importance of attributes varies among the clusters: .

i) first cluster: the product is the most important attribute (value equal to 67), and the residual 33 is distributed among the other attributes whose weight is quite similar;

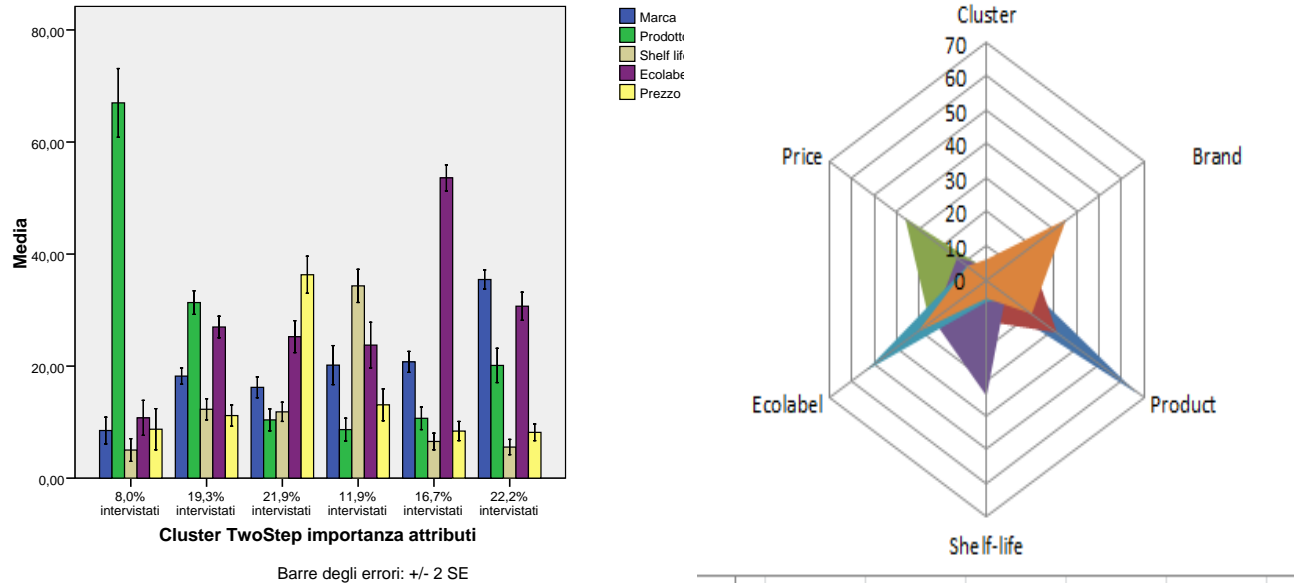
ii) second cluster: the product is the most important but the score is much less important compared with the first cluster (31,34); is emerging the importance of ecolabel (27) and brand (18,21);

iii) third cluster: price is the most preferred (36,3) followed by ecolabel (25,25) and brand (16,21);

iv) fourth cluster: emerges the preferences for shelf life (34,3), ecolabel (23,75) and brand (20,18);

v) fifth group: most important is the ecolabel (53,6), followed by brand (20,8);

vi) sixth group: preference for brand (35,5) followed by ecolabel (30,7) and product (20,12);



**Figure 3.** Cluster two steps: ranking of the five attributes for the six groups and product profile

### 6.3 Language knowledge and consumer preferences

In this table are reported the results obtained with the sample stratification using the language competence: spoken understand, or no knowledge. Results of the preferences for various attributes are reported in the following table.

**Table 8.**  
Consumer preferences for attributes based on language proficiency

	Friulian language competence							
	Spoken		Understood		Absent		Total	
	Mean	Standard error	Mean	Standard error	Mean	Standard error	Mean	Standard error
Constant	86,68	5,15	88,07	7,27	77,73	5,89	84,21	3,44
Italian	-1,73	,56	-1,25	,60	2,32	,78	-,31	,39
Italian + Color	2,32	,58	1,95	,76	3,62	,84	2,63	,41
Friulian	-,38	,49	-1,42	,71	-2,59	,93	-1,37	,41
Friulan + Color	-,20	,62	,72	,83	-3,34	,91	-,95	,46
San Daniele	8,18	,82	5,79	,98	3,74	,71	6,11	,49
Parma	-8,18	,82	-5,79	,98	-3,74	,71	-6,11	,49
Absent	-4,89	,84	-5,87	1,28	-2,23	1,02	-4,31	,59
Italian	3,85	,64	5,50	1,01	5,54	1,03	4,84	,50
English	-1,03	,79	-,17	1,25	-,77	1,02	-,71	,57
Friulian	2,07	,79	,54	,91	-2,53	1,21	,19	,57
Shelf life 5 days	-1,86	2,39	-4,47	2,99	-,72	2,62	-2,21	1,52
Shelf life 7 days	-2,60	3,34	-6,26	4,19	-1,00	3,67	-3,09	2,13
Price 1,20	-18,57	3,69	-17,55	4,97	-15,91	3,31	-17,44	2,28
Price 1,60	-24,76	4,92	-23,40	6,63	-21,21	4,41	-23,26	3,04
Brand	20,23	,89	18,56	1,08	25,60	1,15	21,48	,62
Product	25,56	1,76	21,54	2,08	14,64	1,45	20,99	1,05
Shelf life	11,19	,94	13,15	1,28	11,34	1,09	11,77	,63
Ecolabel	28,06	1,21	29,39	1,91	33,60	1,47	30,19	,86
Price	14,95	1,26	17,36	1,72	14,83	1,29	15,57	,81

#### Comments

Overall evaluation of the attributes: Brand, products, shelf life, ecolabel and price: all attributes are appreciated at different levels according with language knowledge. The most preferred is the eco-label with the highest value in all three groups. Product is mostly appreciated by those who have some knowledge of friulian while brand is more appreciated by non friulian speakers. Price is in the lower position with similar preference among the three groups.

#### Examining the attribute and levels:

Italian: for those who have some knowledge of the friulian, the preference for the Italian has a negative sign while the sign is positive for those that do not have any knowledge of local language. This result shows the different attitude to the languages related to the linguistic competence. It must be taken into account to evaluate the opportunity to use of local language for market communication: if the value of market segmentation will be inferior to the total market value then there is no convenience to support the communication in local language.

Italian + color: the results change consistently with the association of language and color; all respondents explicit the appreciation for this combination of attributes, suggesting the prevalence of the visual sensory prevalence over the identity explained with the diffusion of sensory attributes in the market strategies for the homologation of consumers preferences.

Friulian or friulian + color: this attribute and level is slowly appreciated by friulian expert and strongly rejected by non friulian. This combination is not opportune for market segmentation.

Geographic denomination AOP: The preference for San Daniele is expressed for all the respondents; some differences emerges in examining the three groups: preferences are directly correlated to the friulian language knowledge that influence the AOP quality perception even if the language is not directly used in communication. This is explained with the cultural value of AOP .

Shelf life: for both levels (5 and 7 days), the negative sign suggest a scarce influence in preference.

Price: the negative sign is consistent with the consumer theory and the value suggest that the lower price is preferred to the higher one.

Testing the significant differences of attributes

The two tail test is based on the assumption that the variances are equal at 5% level. For any significant pair the key of the smaller attribute value is reported in the column with the bigger attribute value. All the tests for the paired values are corrected with Bonferroni procedure.

**Table 9.**  
Significant difference of the attribute referred to language competence

Attributes	Friulian language competence		
	Spoken	Understood	Absent
	(A)	(B)	(C)
Constant			
Italian			A B
Italian + Color			
Friulian			
Friulian + Color	C	C	
AOC San Daniele	C		
AOC Parma			A
Absent			
Italian			
English			
Friulian	C		
Shelf life 5 days			
Shelf life 7 days			
Price 1,20			
Price 1,60			
Brand			A B
Product	C	C	
Shelf life			
Ecolabel			A
Price			

Comment on preference for attributes:



Italian: preferred to friulian by nno speaking friulian against the two groups A and B speaking friulian;

Friulian + color (2 levels) preferred to Italian + color by both friulian groups

AOC San Daniele preferred by friulian speaking

AOC Parma preferred by Italian speaking versus friulian speaking.

Friulian: preferred by friulian speaking agaist italian speaking

Brand preferred by Italian speaking against both the friulian groups.

Product: preferred the local San Daniele

Ecolabel: preferred by friulian speaking versus the Italian speaking.

#### 6.4 The combined effect language and color on the simulation of marketing quota

During the analysis of the importance of attribute it has been observed that language and color can have a synergic effect then we explore this association by presenting the results of eight simulation with different combination of language and color and price attributes and levels.

Combination 1: Italian brand + price (1,20 €)

Combination 2: Italian brand + color + price (1,20 €)

Combination 3: Friulian brand + price (1,20 €)

Combination 4: Friulian brand + color + price (1,20 €)

Combination 5: Italian brand + price (1.60 €)

Combination 6: Italian brand + color + price (1.60 €)

Combination 7: Friulian brand + price + (1.60 €)

Combination 8: Friulian brand + color + price (1.60 €)

**Table 10.**  
Simulation of Probability preference

Number of card	ID	Maximum utility (a)	Bradley-Terry-Luce	Logit
1	1	15,8	13,1	14,8
2	2	17,9	13,5	18,6
3	3	16,5	12,7	16,4
4	4	18,0	12,7	18,0
5	5	5,9	12,1	6,1
6	6	14,6	12,5	14,3
7	7	5,2	11,7	5,2
8	8	6,1	11,7	6,6

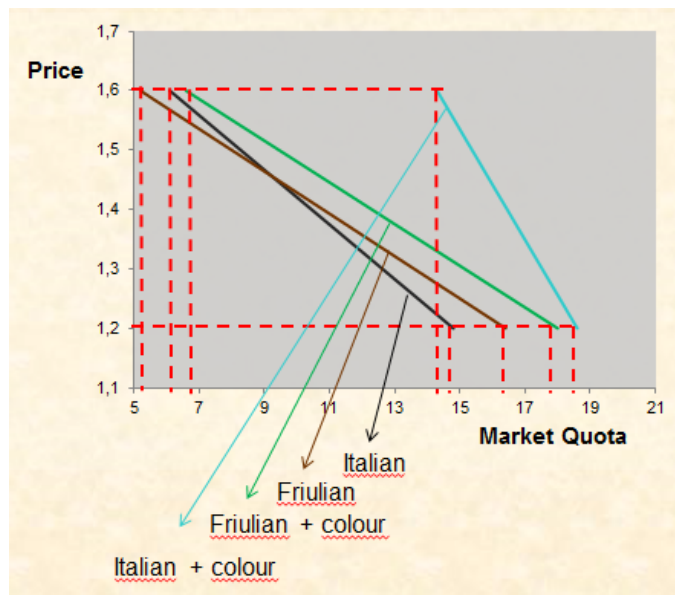
a Including simulation with the same value

b With the Bradley-Terry-Luce e Logit method have been used y on x subjects because all have non negative scores.

**Table 11.**  
Simulation of market quota

Marketing quota (% consumers)					
Price (€)	Brand in italian	Brand in italian + color	Brand in friulan	Brand in friulian + color	Total
1,2	14,8	18,6	16,4	18,0	67,8
1,6	6,1	14,3	5,2	6,6	32,2
Total	20,9	32,9	21,6	24,6	100,0
Elasticity	-2,92	-0,91	-3,64	-3,26	

Fig 4 - Market segmentation using language and colour



**Table 12.**  
Marker segmentation and sale value of 100 consumers

Price (€)	Brand in italian	Brand in italian + colour	Brand in friulian	Brand in friuliano + color	Total
1,2	17,8	22,3	19,7	21,6	81,4
1,6	9,8	22,9	8,3	10,6	51,6
Totale	27,6	45,2	28,0	32,2	133,0

Comment

1 – the segmentation effect using the language alone

The use of italian or friulian languages alone has determined a modest market segmentation. At lower price the quota passed from 14.8 (Italian) to 16,4 (friulian); both quotas covered the 31,2 of the market. At higher price these quotas were respectively 6,8 for Italian and 5,2 for friulian, both quotas covered the 12% of the market. The sum of the quotas at lower and higher prices are almost equivalent with the use of the two languages: 20,9 for Italian and 21,6 for friulian.

2 – the segmentation using the combination language and color

This combination has determined a bigger segmentation effect: at lower price the Italian + color has determined a quota of 18,6% while the friulian + color has determined a quota of 18%; at the higher price the Italian + color has determined a quota of 14,3% while the friulian + color has determined a quota of 6,6% ; The sum of the two quotas are respectively 32,9 for Italian + color and 24,6 for the friulian + color. The market segmentation was more favorable when using the combination Italian + color. This result suggests that the effect determined by language-identity association is covered by the chromatic stimulus that represents better the actual market environment where the consumer homologation is the target of large marketing chains.

(54% of the total); 20,9% at higher price (65% of the total)


The combination italian + colour was very effective compared to italian alone: the quota passed at lower price from 14,8 to 18,6 (+ 5,6%) at higher price from 6,1 to 14,3 (+ 25,4%)


The combination friulian + colour was not very influent in changing the consumer preferences with respect to the friulian alone: at the lower price the quota passed from 16,4% (without color) to 18 (with color) equivalent to + 2,4%. At higher price the quota increased from 5,2 to 6,6 (+ 4,3%).


Here following are reported the market quotas for different product profiles

**Table 13.**  
Market quotas for different product profiles

Sandwich	Brand	Product	Ecolabel	Shelf life	Price
Price = cost					
P01	Casa del prosciutto	San Daniele	We saved water and energy	5	1,2
P02		San Daniele	We saved water and energy	5	1,2
P03	Cjase del persut	San Daniele	We saved water and energy	5	1,2
P04		San Daniele	We saved water and energy	5	1,2
Price = quality					
P05	Casa del prosciutto	San Daniele	We saved water and energy	5	1,6
P06	Casa del prosciutto	San Daniele	We saved water and energy	5	1,6
P07	Cjase del persut	San Daniele	We saved water and energy	5	1,6
P08	Cjase dal persut	San Daniele	We saved water and energy	5	1,6

  
**Variables**

  
**Constant**

  
**Variables**

## 7 Results and conclusion

Purpose of this research was to give empirical evidence of the influence of local language in affecting consumers' preferences and possibly to be used in marketing communication strategies using the CA to rank the preferences for the attributes. The results allow to draw some evaluations about the reaction of of the bilingual consumer to the marketing communication strategies in local language. The first and most important is the local language can in some specific market contest to change the order of the consumer's preferences. The second is that the language of communication that generate the maximum preference for a product depends not only on the consumers' profile (recipients) but also from the communication ambience (empathy ) and communication-mix strategies adopted (sender).

In the region FVG where are currently used a mix of languages (italian friulian, slovenian and german) the most effective communication strategy is represented by a combination of local language with colored label. The explanation is the local language increases the consumers' perception of belonging to the Friulian community that is growing with the local language knowledge.

The English language is not influencing directly the preferences but influence the language learning including the local one a contribute to the cross cultural approach that creates some preferences for the local product that contribute to enforce the identity appreciated in today multicultural contest.

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