

# A Proposal of the Buying Model for Fresh Food Products: The Case of Fresh Mussels

Laurentino Bello Acebrón  
Jean-Pierre Levy Mangin  
Domingo Calvo Dopico

**ABSTRACT.** This paper develops a model of buying intention for food products based on consumer information, habits and prior experience, contrasting it with a perishable product such as fresh mussels. The model studies what influence the attitude and confidence shown by the subject have in evaluating the product in the intention to buy. Also analysed is the influence that habits and previous experience have on the formation of consumer preference and the intention to buy the product. A structural equation model is used to identify these variables and constructs as well as the relations established between them. Furthermore, strategies are presented for both consumers and managers designed to reduce the perceived risk associated with buying fresh mussels. The purpose of this is to reduce the risk perceived by consumers

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Laurentino Bello Acebrón is Professor of Marketing and Head of the Department of Economic Analysis, Area of Marketing Research, Facultad de Economía, A Zapateira, s/n, 15071 A Coruña, Spain (E-mail: lbello@udc.es). Jean-Pierre Levy Mangin is Professor of Marketing, College La Cité of Applied Arts and Technology, Ottawa, Canada, Université du Québec, Hull, PQ. Domingo Calvo Dopico is Research Assistant, Department of Economic Analysis, Area of Marketing Research, Facultad de Economía, A Zapateira, s/n, 15071 A Coruña, Spain.

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### ***SIZING UP THE PROBLEM***

In the main, world-wide mussel and mollusc production has extended to aquacultural activity, which has been especially developed in the EU over the last thirty years. There was a sharp increase in production up until the early '80s, with production Figures holding steady at 600,000 metric tons per year afterwards (Josupeit, 1997). This activity is extremely important for Galicia since it is the second most important producer of this mollusc, surpassed only by China. The market for fresh mussels is becoming globalised, although within this market we find two clearly differentiated markets: the market for fresh mussels and that of canned mussels, with the latter progressively gaining a market share over the fresh mussel market. In the case of Galicia, this transition has brought about a considerable loss for the entire sector due to the weak bargaining position of the production sector as opposed to canneries, cookeries and shipping centres. This fragmentation of the production-extraction sector (Porter, 1998), together with the entrance of mussels produced abroad, the appearance of other competitors like Ireland and the Netherlands (Vieites, 1997) in such a market as France—formerly dominated by Galician mussels (López Outeiral, 1997)—and the risk perceived by consumers as a consequence of red tides, has led to a decrease in fresh mussel production. Thus, all of this makes it necessary to perform research on the buying behaviour of mussel consumers in order to determine those aspects of mussels that can be improved, such as the bearing on consumer habits, product attitudes, available information and risk perception. This article attempts to identify the causal relationships between the different variables that determine fresh mussel buying behaviour and to strengthen commercial policies at both the regional and national level that enable the autochthonous mussel market to recover and add value in international

markets. We will create a buying model for fresh products that will be applied to the case of fresh mussels. To begin with, we will review the research studies done up to now and then go on to formulate the model.

### ***OVERVIEW OF THE LITERATURE ON THE MODELLING OF CONSUMER BUYING BEHAVIOUR***

Starting in the 1960s the modelling of consumer behaviour (Nicosia, 1970; Engel et al., 1972; Howard and Sheth, 1969; Bettman, 1979; Howard, 1989, 1993) became the focus of a large amount of attention. Research on the subject, such as that conducted by Robertson and Kassarian (1992), Howard (1993), Hawkins et al. (1994), posits consumer behaviour as a process of problem solving in which subjects, after recognizing a need, begin to look for relevant information from among the different alternatives available on the market. After the search for information, the consumer begins to form his product preferences: based on his likes and confidence, he decides whether to buy. The focus of Engel et al. (1972) is on individual beliefs and perception as the basis of attitude formation, a conditioning factor in the intention to buy and final purchase of the product. The model of Howard-Sheth (1969) also deals with attitude formation as a fundamental part of the evaluation phase. Included in the subsequent model proposed by Howard (1989) for buying behaviour as two basic factors from which the consumer makes his evaluation and final selection are brand and perception. The buyer, conditioned by external or environmental influences and by informational stimuli, goes through several different stages: recognition of the problem or need; search for information; evaluation of alternatives; selection of purchase; and results of the selection, also explained as buyer satisfaction (Howard, 1993).

### ***PREVIOUS RESEARCH: HOWARD'S MODEL (1989)***

Howard's model (1989), based on the premises of imperfect information and limited rationality, describes buyers' behaviour in a straightforward way, starting from when there is a need (problem recognition) up to product purchase, or until the intention to buy is formulated.

Subjects look for information in such external stimuli as advertising, friends, store personnel, through interpersonal communication, etc. (Steenkamp et al., 1985), in addition to internal stimuli, e.g., memory (Wierenga, 1983). Based on this information the consumer then goes on to recognize the product, product category or brand. This recognition enables him to categorise the product, form an attitude about it and have confidence in his own ability to evaluate it. Confidence is the other element that plays a role during the evaluation phase. Howard defines it as the buyer's degree of certainty about his ability to correctly judge a product, which increases with the positive experiences gained as a result of trying the product or receiving favourable information from external sources. Confidence—the ability to evaluate the product—and attitude also have a bearing on the intention to buy a product, which is defined as the subject's plan to buy a specific number of product units. As confidence increases and attitude becomes more favourable toward a product, the intention to buy becomes stronger. Furthermore, attitude will have a positive bearing on product purchase if confidence increases. This theory also explains the fact that, in the event that there is a certain amount of buyer distrust in evaluating the product, a favourable attitude on behalf of the consumer will lead him to attempt to improve his conception by looking for more information, thereby increasing the intention to buy (Howard, 1993). The Howard-Sheth theory (1969), the perceived-risk theory (Cox, 1967) and Bettman's model (1971) suggest the existence of tolerance levels for incongruous information, perceived risk or ambiguity (Schaninger, 1976). These theories suggest that when this level is low, consumers will search for more information; when it is very high, consumers can reduce it by seeking consistent information, by means of brand loyalty and warranties (Shimp and Bearden, 1981), or acquiring handling information (Taylor, 1974).

### ***THE PRESENT STUDY***

The present study attempts to integrate the previous research on the modelling of buying behaviour and apply it to the case of fresh mussels, so as to be able to respond to new consumer demands in the purchase of this mollusc. It is expected that findings will not only be relevant for our market of Galicia, but for international fresh mussel markets as well.

These consumer behaviour models, including Howard's, use a holistic approach to explain buying behaviour. The scope of the present paper, however, does not include the motivation that sets off the whole buying process, the final selection and the results derived from it (satisfaction). All of the overall behaviour models use motivation as a central explanatory element (Howard and Sheth, 1969; Engel et al., 1972, Bettman, 1979). In all of these models there is a motivational basis that provides the impulse to undertake the search for information (Lambin, 1991). Be that as it may, and so as not to go beyond the objectives set forth herein, we have focused on the decision-making process that is activated after the need to acquire a food product is recognized. These limitations have made it necessary to delimit the field of action and study the most significant relationships among existing variables. Using Howard's model (1989) and the contributions that Steenkamp et al. (1985) and Wierenga (1983) have made for food products as theoretical grounding, we have devised a model on buying intention of fresh food products and contrasted its findings for the case of fresh mussels.

***Devising the Model:  
Selecting the Determining Variables  
in the Buying Decision-Making Process***

After carrying out the preceding research and stating our objectives, we have proceeded to devise a model based on the identification and selection of the most relevant variables and determining factors in the buying process for fresh food products.

***Information Base***

***External Information Search***

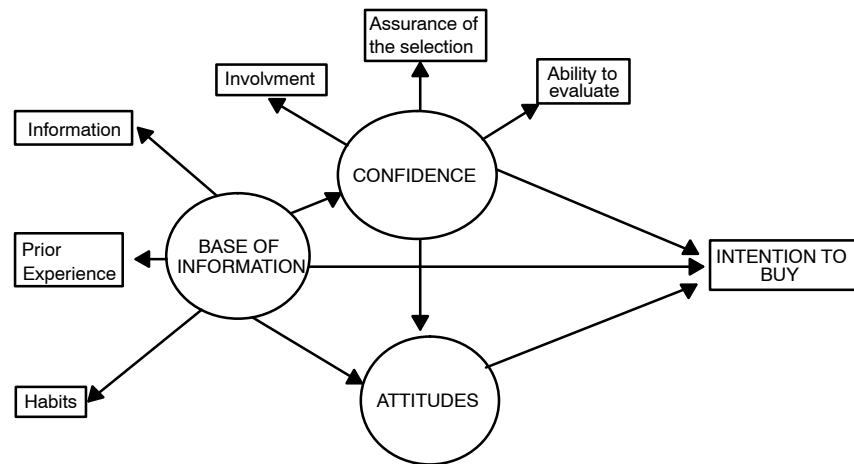
Once the problem has been identified, a first set of processes begins with analysing the relevant information (Bettman, 1979). The research that looks at the process of the buyer's search for information has focused on the acquisition of external information and its determiners (Srinivasan, 1990). Many studies analyse this search from the perspective of external information sources. This research has shown that the majority of buyers, especially for food products, do not look for much information. Food items have a low cost. This gives rise to the as-

sumption that the buyer does not get involved in an extensive process of searching for external information (advertising, interpersonal communication, and retail outlets). Subjects, in general, will not look for much information given that the benefits derived from the external search would not compensate for the monetary sacrifice and time implied by such a search. This variable has been designated as the background information or level of information acquired up to this moment on the product to be analysed. As it will be shown in the model and questionnaire, this variable reflects the level of information that consumers have on the product in question, which was obtained through commercial sources (e.g. advertising), interpersonal communication (friends and retail outlets) or independent sources.

### *Internal Information Search*

The internal search process is a phenomenon that has not been researched thoroughly, but, as it will be shown, it is crucial in the final selection or the intention to buy the product (Gomez M.A., 1997). In this case, the information stored in memory (Bettman, 1979) as well as previous knowledge and experience, together with habits (Bello Acebrón et al., 1997), are determining variables that have a bearing on the final selection of the food products, or else on the intention to buy. Nevertheless, internal information sources (habits and experience) are those that will condition the search for information and its influence on the intention to buy the product, and even on how it is evaluated. That is, the consumer bases his search for information on beliefs, experiences and habits that have already been formed (Hawkins et al., 1994, Steenkamp, 1990, Bello Acebrón et al., 1997). Empirical research for food products has revealed (Box, 1984) that prior experience and habits are a very important information source in the case of buying food products. The most important and representative observable variables that constitute the base of information of our model are: prior experience with the product, habits and level of information, which includes the sources of external information like commercial sources, personal sources and independent sources. These variables (Srinivasan and Ratchford, 1991) constitute the parameters of the first part of the model (see Figure 1). The theory permits us to formulate the first hypothesis:

FIGURE 1. Model of Buying Behaviour of Food Products



Source: Adapted from Howard (1989)

H1: Habits, prior experience and information constitute the subject's information base and have a direct bearing on the formation of attitudes and confidence.

### *Evaluation Phase: Attitude and Confidence*

The information base is what enables the consumer to recognize the product, evaluate it, form an attitude about it, and mentally create a level of confidence or certainty in order to judge whether the product will provide satisfactory or unsatisfactory results (Howard, 1989). When a product is recognized by the consumer, an attitude and a level of confidence are formed, which are used to evaluate it (see arrows in Figure 1).

### *Attitude*

Attitude towards the product can be defined as the predisposition towards the product, which is made up of three components (the cognitive [credence], the affective [feeling] and the conative [behaviour]) and is conditioned by prior experience, habits, information and confidence (see model, Figure 1). Therefore, the attitude towards the

product will be explained by subjects' like of the product, credences and opinion, habits, prior experience, information and confidence. This attitude will condition the intention to buy the product (Lutz, 1991), as it is the buyer's predisposition to regard the product in a consistent way. Therefore:

H2: The greater the attitudes towards the product the greater the predisposition to buy the aforementioned product will be.

### *Confidence and Perceived Risk*

This is the second element that was considered in the product evaluation phase. It can be defined as the degree of buyers' certainty with respect to their confidence in evaluating the product. A large variety of concepts like importance, involvement and uncertainty have been related to the concept of confidence. We have defined this construct like the degree of buyers' certainty with respect to their confidence in evaluating the product, that is, the perceived ability in evaluating the product. The variables that influence on this ability are the involvement with the decision making, the assurance of the selection and the ability to evaluate the product (Bettman, 1973).

## ***INVOLVEMENT IN DECISION MAKING***

We can define this as the personal relevance or importance that a specific buying decision has for the subject making the decision. It is a measure of interest in regard to the decision to buy, and therefore has been included as a relevant variable in the evaluation process. Moreover, involvement is another determining variable in the use of information stored by the subject and has a direct bearing on the evaluation that the subject will make for the product in question.

## ***ASSURANCE OF THE SELECTION***

Not only does involvement have a bearing on the confidence construct, but also on the assurance of the selection: the uncertainty perceived by the subject on evaluating the product (Gomez, 1997). Thus, it indirectly records the confidence shown by the subject in his



ability to correctly evaluate or rate the product. Coming out of this is the fact that the greater the assurance shown by the subject, the greater confidence he will have in evaluating the product in question, which in this case is fresh mussels.

### ***ABILITY TO EVALUATE THE PRODUCT: PERCEPTION OF RISK***

This is an extremely important variable in the case of food products, where there are, in some cases, high levels of perceived risk, especially for perishable goods. The ability or confidence shown by the subject in evaluating the product can serve to indirectly measure perceived risk, given the fact that it is directly related to confidence.

A wide range of concepts, such as importance, involvement and stimulus have been related to the concept of risk perception (Bettman, 1975). Grunert (1978) defines perceived risk as follows: risk is a state of psychic tension that is experienced by the consumer in his decision-making process, whose results emerge from the fact that the consumer has, on one hand, a desire to buy a particular product, but, on the other, reluctantly accepts the negative consequences of the purchase. Perceived risk is a dimension that explains or helps account for the reasons for making a purchase or not making one (Bettman, 1973; Cunningham 1967a). Perceived risk is related to specific self-confidence (Cunningham, 1967b, Taylor, 1974), that is, the individual evaluation of confidence when handling a specific task or resolving a concrete problem. The research of Hisrich et al. (1972) and Locander and Hermann (1979) has also demonstrated that the ability to evaluate is a relevant factor in the perception of risk, so that the greater this risk, the less favourable the evaluation will be. In fact, the evaluation of products has been linked—especially for perishable food products (French et al., 1972)—to perceived risk. This is also true for the ability to assess the product. If consumers show very little ability in evaluating products and there is a pronounced heterogeneity in supplied products, then, for the given perishable product, perceived risk will have a negative bearing on product evaluation. Mussels are perishable items that need to be free of toxins and other substances harmful to health if they are to be consumed, that is, their salubrity must be guaranteed. In this connection, information generated on the market may cause uncertainty

that is detrimental to the product itself as well as the perception and information processing that the consumer undertakes in this phase.

H3: If the buyer's confidence increases, his intention to buy will also increase, but the latter may be reduced if there is a substantial level of perceived risk.

#### *Attitude and Confidence*

For a food product, as is the case with mussels, attitudes are highly defined: the buyer has a rather clear-cut, stable attitude, which is either favourable or unfavourable. A favourable attitude has a considerable bearing on intention, which becomes greater if confidence is high (Howard, 1989). If the attitude is favourable and the subject shows confidence in evaluating the product, confidence will be a very important support in purchasing the product. If the subject's attitude is unfavourable, and his confidence is low due to negative experiences or information on the market that has created an unfavourable image (e.g., toxins), his conviction of the product as having a poor image will increase, thereby reducing his intention to buy.

H4: A favourable/unfavourable attitude has a considerable bearing on intention, which increases or decreases depending on whether confidence is higher or lower.

#### *Does Information Have a Direct Effect on the Intention to Buy?*

The consumer behaviour theory dealing with buyers of everyday products with low rates of involvement (Assael, 1992) has supposed that, presumably, attitude and confidence are already formed. For the case under consideration here, we were unable to assume this, considering that there is a perceived risk, and the food item, despite having a low cost, is not an everyday purchase. This would have led us to study the interaction between attitude and confidence and their relationship with the search for information and final intention to buy. Nevertheless, we ask ourselves whether, despite this, information has a direct effect on intention. The hypothesis that emerged from the model is as follows:

H5: The more previous experience, habits and information, the greater the intention to buy the product will be.

## **METHODOLOGY**

### ***Procedure: Sampling and Data Collection***

In the first pre-questionnaire phase, in-depth interviews and a group meeting with fresh mussel consumers were held, which enabled us to formulate the questionnaire that is included in the appendix. The system of selecting sample units was multi-stage and stratified with proportional assignation. It consisted of the following phases:

1. Creation of a theoretical sample. Identification of fresh mussel consumers' profiles according to the following criteria: Locality, age and number of persons living in the home. Locality, age and number of persons living in the home were the social-demographic variables used to identify the profile of fresh mussel consumers. These are the criteria used by the Ministry of Agriculture, Fishing and Food (MAPA) for these kinds of studies. The sample can be classified as multistage, since it was necessary to proceed by stages and stratify according to type of habitat, age and size of household with proportional allocation. This allowed us to define a theoretical sample that was representative of the target population.
2. Selection of the sample unit by means of the random-route procedure.
3. Checking sample representativeness with a Chi-squared test. The purpose of this method is to set the profiles of consumers from a given population beforehand and then adjust the actual sample of individuals obtained by means of random selection to this theoretical sample that we have defined. Once this random selection has been performed (phase 2), its representativeness is definitively checked by means of a Chi-squared test, bringing the sample obtained in phase 2 into line with the theoretical sample in phase 1.

In order to analyse the information, the data collected from the sample chosen were then codified and tabulated and a database was made from which the empirical study was carried out. A total of 221 questionnaires were completed, from which we culled 180 valid observations. A matrix of  $180 \times 8$  was obtained, that is, 180 rows corre-

sponding to the responses of the individuals, and 8 columns representing the variables used in the analysis (see Table 1).

### ***Development of the Questionnaire***

Field work began with a pretest given to 20 individuals, followed by a structured personal questionnaire which collected information on Galician consumers' habits when buying fresh mussels. After the pretest the final questionnaire was made with some minor modifications. The questionnaire was developed on the basis of the previous theory. The final questionnaire consisted of questions regarding the variables that have been explained in the model and the previous theory. A detailed list of the questions posed and the rating system used are given in the appendix containing the questionnaire. We have defined the most important variables of Howard's model like information, attitudes, confidence and intention to buy and incorporated prior experience, habits, involvement, ability to evaluate, assurance in the selection and ability to evaluate.

### ***Suitability***

In order to test the validity of the hypothesis, we have opted for systems of structural equations, also known as causal analysis. Causal

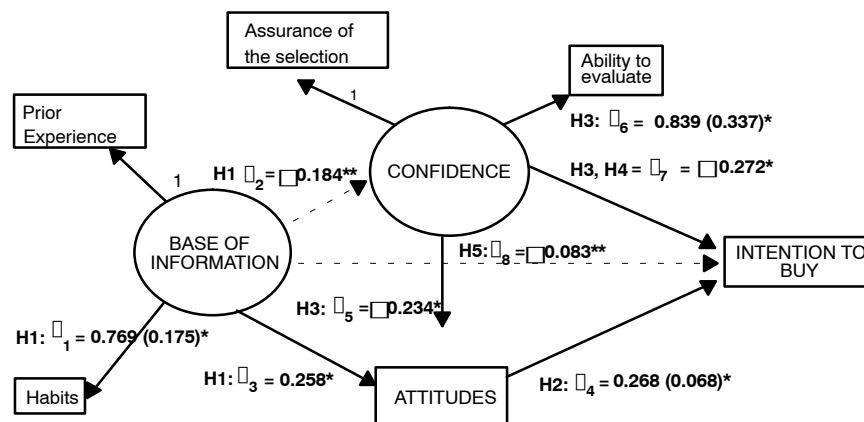
TABLE 1. Technical Specifications of the Survey

Population	Potential households buying food products
Sample Unit	Person in charge of making decisions about family purchases
Field	The cities of La Coruña and Lugo (Spain)
Type of Survey	Personal, at home
Sample Size	180 valid questionnaires
Sample Error	$\pm 5.5\%$ , for a confidence level of 95.5% ( $k = 2$ ), in the most unfavourable condition ( $p = q = 0.5$ )
Type of Sampling	Multistage with stratification according to locality, age and size of household with proportional allocation. Random selection of individuals to be surveyed and test Chi-square to adjust the representativeness of the sample
Period of Field Work	April, 1998

modelling integrates the estimation of observable variables (in our case information, habits, prior experience, attitudes, ability to evaluate the product, assurance, involvement, intention) and two latent variables (information base and confidence). The observable variables are represented by rectangular layers and the latent variables by circles (see Figure 2). All of them are included in a model of structural equations which are based on the statistical theory of maximum likelihood.

This methodology, based on the elaboration and contrasting of causal models, is well suited for our purpose. We understand that consumers, after recognizing the need (thereby activating reasons for buying), begin a search for information that is mediated by their experience, information and habits (observable variables). The consumers will base themselves on their attitudes and the confidence they have in

FIGURE 2. Results of Modelling



Fit measures: Chi-square = 5.551 df = 6 p = 0.475 GFI = 0.990 RMR = 0.026 AGFI = 0.966 CFI = 1.000

The Beta Weights are the standardized regression weights and the standard errors are in brackets

\* The parameters are significant ( $p < 0.05$ )

\*\* The parameters are not significant

Source: Adapted from Howard (1989)

evaluating it in the buying decision. Lastly, the consumers will formulate their intention to buy (observable variable) as a prediction of the final product purchase. A causal analysis implies defining a model, estimating the parameters based on observable data, calculating the model's margin of adjustment, and testing the model against theory (Sulé Alonso, 1998). The method requires variables to be distributed evenly. After this has been verified, relations of the latent variables and the observable variables used to measure them are checked, in order to assure the validity of each construct when estimating relations. Afterwards, a confirmatory analysis confirms the relationships before being established, specifying the relations between the constructs or latent variables through a path diagram. Finally, EQS gives an estimation of the proposed model, contrasting it empirically using a procedure of maximum likelihood (Levy Mangin, 1997).

### ***TESTING THE HYPOTHESIS***

The model that has been proposed is based on eight observable variables: V1–information, V2–habits, V3–prior experience, V4–attitudes, V5–ability to evaluate the product, V6–involvement, V7–assurance, and V8–intention to buy the product and two latent variables: information base and confidence. The results obtained from the estimation of the model are shown in Table 2.

#### ***H1: The Influence of Habits and Prior Experience***

One of the most important variables that influences the evaluation is habits. The parameter has a value of  $\beta_1 = 0.769$  and it is very significant (5.320). This confirms that consumers are highly influenced by this variable, as well as by experience, which is important despite there being no critical ratio due to the fact that coefficients were set at one in order to attain the identification of the model. Habits influence not only product selection, but also the formation of attitudes and, sequentially, the evaluation phase. This confirms the first hypothesis, in which we explain the influence of the information base on the formation of attitudes and confidence. As we had supposed in H1, these variables, mainly habits and prior experience, have a direct influence on attitude toward the product and have a bearing on the ability to evaluate said

TABLE 2. Results of the Estimation

Regression Weights	Standardized Regression Weights	Standard error	Critical region
Confidence $\leftarrow$ Information base**	$\beta_2 = -0.184$	0.076	$[-1.902]$
Attitude $\leftarrow$ Information base*	$\beta_3 = 0.258$	0.086	2.976
Attitude $\leftarrow$ Confidence*	$\beta_5 = -0.234$	0.110	$[-2.699]$
Experience $\leftarrow$ Information base***	1		
Habits $\leftarrow$ Information base*	$\beta_1 = 0.769$	0.175	5.320
Assurance $\leftarrow$ Confidence***	1		
Ability $\leftarrow$ Confidence*	$\beta_6 = 0.839$	0.337	3.845
Intention to buy $\leftarrow$ Attitude*	$\beta_4 = 0.268$	0.068	3.651
Intention to buy $\leftarrow$ Confidence*	$\beta_7 = -0.272$	0.104	$[-3.081]$
Intention to buy $\leftarrow$ Information**	$\beta_8 = 0.083$	0.105	1.043
Chi-Square = 5.551 Degrees of freedom = 6 Probability level = 0.475 GFI 0.990 RMR 0.026 AGFI 0.966 CFI 1.000			

\* Significant at  $p < 0.5$

\*\* Not significant

\*\*\* The non-existence of a critical ratio is due to the fact that coefficients have been set at 1 in order to attain the identification of the model.

product. Thus, as it can be seen in Table 2, the relationship between information and attitudes is positive ( $\beta_3 = 0.258$ ) and significant (2.976), reflecting, as per our hypothesis, the influence on the formation of consumer attitudes. Nevertheless, the relationship between the consumer's information base and confidence is negative ( $\beta_2 = -0.184$ ), although not significant ( $[-1.902]$ ). This brings out the fact that there is information that deteriorates and damages the product's image. The information base—through habits and experience—exerts a great influence on the formation of consumer attitudes and confidence.

## ***H2: Attitudes and Intention to Buy the Product***

In the evaluation stage, as we supposed (H2), attitudes towards the product are determining factors in whether the product is bought. The

coefficient is positive ( $\beta_4 = 0.268$ ) and significant (3.651) (see Figure 2). Attitudes towards the product clearly determine the intention to buy food products, as it has been forwarded in a good deal of the research on food products.

***H3 and H4: Positive Relationship Between Confidence and Intention to Buy; The Influence of Perceived Risk***

Nevertheless, the third hypothesis cannot be proved. The third hypothesis (H3) supposes that when the buyer's confidence increases, so does his intention to buy. The results confirm a negative relationship between confidence and intention to buy. Moreover, there is a negative ( $\beta_5 = -0.234$ ) and significant ( $-2.699$ ) relation between confidence and attitude. So, the presence of perceived risk exerts a negative influence not only on attitudes but also on the intention to buy (Bello Acebrón and Calvo Dopico, 1999). The regression weight casts a negative value. In H4 it was hypothesised that if consumers show a favourable attitude toward the product and confidence is high, intention will increase. Nevertheless, the intention to buy the product (predisposition) was reduced due to the fact that the subject shows a lack of confidence in evaluating the product. The negative relation between confidence and attitude (see Figure 2) explains this claim. Despite the fact that, as we had hypothesised in H2, consumers have an intention to buy the product because the attitudes are positive (the coefficient has a positive value and is significant as well), they exhibit a great lack of confidence when making their evaluation. The consumer desires to buy the mollusc, the fresh mussel, but yet reluctantly accepts the negative consequences of the purchase (the coefficient is negative ( $\beta_7 = -0.272$ ) and significant ( $-3.081$ )). The conclusion is evident: perceived risk represents a restraint on the predisposition to buy the product.

***H5: Direct Effect of Information Base on Intention to Buy?***

Finally, although there is a positive effect of the information base on intention, as we supposed in H5, the parameter shows a positive value of 0.083, but is not significant ( $\beta_8 = 1.043$ )—which is very much below the critical region of  $\pm 2$ . As it has been stated some authors claimed



that consumer attitudes are already previously formed for food products, which would produce a routine decision based on prior experience and information. This hypothesis does not hold up in the case of products for which there is a significant perceived risk or an unfavourable image. Information stimuli should target the information and evaluation phases, attempting to reduce the perceived risk and improve the product's image.

### ***GOODNESS-OF-FIT***

As can be seen we got a very good adequacy and fit. GFI (0.990) and AGFI (0.966) are very close to 1 and the RMR (0.026) (Root mean square residual) is very close to zero. There have had two variables, the information (V1) and the security (V7), which cannot be included in the model because they don't distribute as a normal variable. For this reason they have been removed.

### ***IMPLICATION FOR CONSUMERS: STRATEGIES FOR REDUCING PERCEIVED RISK***

As we have seen, perceived risk serves to impede mollusc purchases. Consumers want to buy molluscs because they like them and expect them to meet their needs, but, on the other hand, they refuse to buy them because of the negative consequences. It involves the risk of experiencing some type of loss. Toward this end, our objective is to provide different strategies that reduce this risk and, in any event, minimise this loss. Much of the available research supports theoretical constructs that focus on information handling (Taylor, 1974), and reduction of consequences (Cox, 1967). The risk-reducing strategies ought to be targeted at the information acquisition phase, such as word-of-mouth endorsements, or purchase of products that have been tested by an independent institution.

### ***IMPLICATIONS FOR MANAGERS: BUILDING A BRAND, REPUTATION AND FREE SAMPLES***

The preceding results also have important implications for managers. There are also strategies that can be used by managers to help improve

the image of molluscs and to reduce the perceived risk associated with them. Molluscs are perishable items, and for them to be consumed they must be in a perfect state of freshness and salubriousness. Toward this end, managers and sales outlets can offer free samples to consumers so as to reduce the risk associated with molluscs and lessen the negative consequences of making an incorrect selection. On another front, the creation of a brand name might help the consumer to reduce the levels of perceived risk and improve the image of molluscs.

### ***SUMMARY AND CONCLUSIONS***

We have attempted to explain consumer behaviour with regard to buying fresh food products, and an empirical application for fresh mussels has been provided. Results confirm consumers base the evaluation on their habits and prior experience. The proposed model provides an explanation as to how the subject's information base—which stores all the information the subject has obtained from different sources, as well as his habits and prior experience—, attitude and confidence combine to transform informational stimuli into purchases. These variables are basic in the buying process of food products, having a direct bearing on the intention to buy. In the case of fresh mussels, perceived risk in the buying process has a negative bearing on both the formulation of attitudes and confidence, and hampers the willingness to buy said product. This is an important contribution given that the previous theory regarding consumption has supposed that the consumer looks for more information when he does not have enough confidence to evaluate the product in order to reduce this perceived risk. Yet, as it has been shown in the hypothesis contrast, perceived risk impedes product purchase. Moreover, as it could be gathered from the final results of the model, there also exists a negative relation between the consumer's information base and confidence in evaluating the product, from which it can be deduced that there is an unfavourable image of the mollusc that also negatively affects the confidence to evaluate the product and, indirectly, attitudes for said product. It is necessary to improve the image of fresh mussels, eliminating the perceived risk and the unfavourable image associated with them. All informational stimuli should be focused on improving the image of molluscs and reducing their perceived risk. Molluscs should present functional and symbolic benefits that improve their image

(Bello Acebrón and Calvo Dopico, 1999). This entails guaranteeing not only the salubriousness of molluscs, but also improving their image by means of visible quality labels in the case of fresh mussels, containers that visibly display the mussel proper, handing out of free samples and creating a brand that helps to reduce risk levels and results indirectly in positive experiences with the product.

### ***LIMITATIONS AND FURTHER RESEARCH***

We have only studied the relationship between the main constructs (information, attitude confidence and the intention to buy), without observing what the final purchase was. We should also understand that both implication and attitude are constructs that are the result of the integration of different variables that have nevertheless been measured on a single-item scale instead of a multi-item scale (Zaichowsky, 1985). Moreover, we should know and measure not only the confidence in relation to choice of the product category, but also the perceived risk of the different options that exist within each product category. For example, it would be relevant to know what is the relation between perceived risk and the intention to buy and the actual purchase for the different mussel alternatives: fresh, frozen, canned and pasteurised. Likewise, it would be of interest to measure consumer attitudes for the different risk-reducing strategies that have been proposed, especially insofar as the creation of a brand name and the improvement of the image of sales outlets are concerned.

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## APPENDIX

University of A Coruña  
Area of Marketing Research

Questionnaire number: (household code). . . . .

P.1. Regarding the amount of information you have on fresh mussels (obtained through advertising, family and friends, print media, information and advice of store personnel) and their characteristics, uses and methods of preparation, etc., how informed do you consider yourself to be? (see card number 1)

- |                      |                        |                      |
|----------------------|------------------------|----------------------|
| 1. Very informed     | 2. Quite informed      | 3. Somewhat informed |
| 4. Not very informed | 5. Not informed at all |                      |

P.2. Among the different food alternatives, what is the degree of familiarity that you and your family have had with fresh mussels? (show card number 2)

- |                |                  |           |
|----------------|------------------|-----------|
| 1. Very common | 2. Rather common | 3. Common |
| 4. Uncommon    | 5. Rare          |           |

P.3. Considering the eating habits of you and your home, mussels have been present (show card number 3):

- |                    |               |                 |
|--------------------|---------------|-----------------|
| 1. Very frequently | 2. Frequently | 3. Sporadically |
| 4. Almost never    | 5. Never      |                 |

P.4. State your likes for the product under consideration. (show card number 4)

- |                       |                         |                     |
|-----------------------|-------------------------|---------------------|
| 1. Like it very much  | 2. Like it quite a bit  | 3. Like it somewhat |
| 4. Don't like it much | 5. Don't like it at all |                     |

P.5. Tell us, based on the following scale (show card number 5), the level of confidence you have when evaluating the different mussel alternatives when buying them.

- |                  |                       |                       |
|------------------|-----------------------|-----------------------|
| 1. Not confident | 2. Slightly confident | 3. Somewhat confident |
| 4. Confident     | 5. Very confident     |                       |

P.6. When you buy mussels, what importance (show card number 6) do you give to the decision made?

- |                    |                         |           |
|--------------------|-------------------------|-----------|
| 1. Not important   | 2. Of little importance | 3. Normal |
| 4. Quite important | 5. Very important       |           |

P.7. When you select and buy from among the different mussel alternatives, what level of assurance do you have about the result of that selection? (show card number 7)

- |                  |                     |           |
|------------------|---------------------|-----------|
| 1. Not assured   | 2. Somewhat assured | 3. Normal |
| 4. Quite assured | 5. Very assured     |           |

P.8. Please indicate your willingness to buy fresh mussels. (show card number 8)

- |                             |                                 |                |
|-----------------------------|---------------------------------|----------------|
| 1. Will definitely buy them | 2. Will probably buy them       | 3. Indifferent |
| 4. Probably won't buy them  | 5. Definitely will not buy them |                |