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## **Antecedents of loyalty for food products – Investigating the effects of subjective constructs**

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**Abstract**

Our research aimed to reveal the effects that can be observed during the buying process of food products and can influence the decisions of customers. We focused on the role of enduring involvement in customers' behavioural loyalty, that is, the repurchase of food brands. To understand this relationship in a more sophisticated way, we involved two mediating constructs in our conceptual model: perceived risk and perceived knowledge of food products. The data collection was carried out among undergraduate students in frame of an online survey, and we used SPSS/AMOS software to test the model. The results only partly supported our hypothesis, although the involvement effects on loyalty and the two mediating constructs were strong enough, loyalty couldn't be explained well by perceived risk and knowledge. The roles of further mediating/moderating variables should be determined and investigated in the next section of the research series.

**Keywords:** involvement brand loyalty, subjective knowledge, perceived risk, food products

**Introduction**

As a result of the introduction of the Stimulus-Organism-Response (S-O-R) paradigm in psychology by Woodworth (1928), there has been substantial research focusing on the investigation of subjective variables that play dominant role in individuals' reaction to different

stimuli or affect these responses. This new approach has also induced a number of new mainstream research directions in marketing and generated many new concepts which help to understand the individuals' buying behaviour. Despite having widely studied, concepts and relationships in this area have remained undefined and unrevealed, which demonstrates the complexity of the buying process.

In our research series we aimed to investigate the effect of enduring involvement on brand loyalty. Many research projects have focused on this link and determined different levels of association so far (Mittal and Lee, 1989; Shukla, 2004) but this area has not been completely explored, especially because of the moderating and/or mediating role of the related concepts.

In the development phase of the theoretical approach we aimed to determine a general research concept but our empirical investigation focused on foods. In our conceptual model we included the perceived risk of foods and customers' perceived knowledge of them with the intention to identify the effects these concepts bring into this relationship.

In most cases, involvement explains the long lasting and intensive process of information seeking, decision-making, and application of different choice criteria, etc.. Buying food products, on the other hand, can be a recurring habit and routine. The relative low monetary cost of particular food products and the weak effect of individual brand decision-making on the household budget (Mitchell and Harris, 2005) can lead to low (situational) involvement of customers. Researches supporting this effect mainly concentrate on specific product categories instead of foods in general. Although a particular food product does not cause difficult decision-making problem for customers, the whole food category plays important role in their life. The increasing consciousness of customer behaviour and the more intensive interests in healthier life-style have drawn additional attention to this area. The communication activities of producers and retailers and the faster and faster product development and market launch can also strengthen the inquiry towards food products in general. These tendencies and the concept of loyalty itself suggest that in case of foods we should investigate the enduring, context-free factors and individuals characteristics. Hence, we focused on enduring involvement, general risk and knowledge perceived by customers to explain the variance of brand loyalty.

### **Literature review**

As all the concepts we used in our conceptual model are not clearly defined in the marketing literature, or, at least, we can find minor differences in their meanings and classifications, it is useful to review the competing approaches before measuring the association between them.

### ***Loyalty***

In general we can determine two different types of loyalty, behavioural and attitudinal ones. The former refers to the relative frequency of returning to the object of loyalty, that is, it means buying the same brand or visiting the same store. In case of attitudinal loyalty we presume a kind of emotional commitment towards the favourite brand, product category, store, etc. The two concepts can strongly correlate but do not necessarily exist at the same time, as many factors can distract customers from the preferred brand, for example out-of-stocks, price reductions of competing brands, and so on. Dissatisfied consumers, on the other hand, can show similar buying patterns and select the same brand because of the concept of inertia, the perceived monetary and cognitive cost of brand switching, or for other reasons. If customers are both emotionally committed and frequently buy the same brand, we can regard them truly loyal ones, but the literature distinguishes spurious and latent loyalties as well, based on the attitudinal and behavioural dimensions of the concept (Dick and Basu, 1994)

Within this study loyalty is considered in terms of behavioural rather than attitudinal one since latter is a more complex concept with several subcategories.

### ***Involvement***

The concept of involvement first appeared in social psychology (Sheriff and Cantril, 1947), where it describes the relationship between the ego and an object as a group of beliefs related to the individual. Others have used it to describe a general level of interest taken in an object (Day, 1970). According to one of the most widely used definitions of involvement it is “a person’s perceived relevance of the object based on inherent needs, values, and interests” (Zaichkowsky, 1985:342).

In this study we view involvement as an internal state that reflects the importance and relevance of the object for the individual. As we mentioned in the introduction, the research presented here focuses on general enduring involvement in food products. The two reasons behind that are the low situational involvement level in case of buying in this product category and our conscious orientation to reveal context-independent mechanisms behind the loyalty concept. Within the enduring nature of this concept, in this phase of our research series we measured involvement in food products as a whole, that is, respondents had to evaluate their relations to this category in general.

### ***Perceived risk***

Perceived risk is a relatively well-defined concept in marketing literature, although, the different subtypes of it requires further conceptualization work and currently have received greater research attention. We accept the definition of Kindler (1987:13), which states that “the risk is description of a behavioural alternative’s potential, negatively perceived consequences including both weight and probability of occurrence of them”. In respect to our study, an important distinction is made by Bettman (1973), who determined two types of perceived risk, inherent and handled ones. Inherent risk is related to the product category, and this constant perception is independent from situational factors. Handled risk can be induced by inherent risk but, besides that, many other contextual stimuli, as well. As, we concentrate on the enduring characteristics of the buying process, we included inherent risk in our research model.

### ***Subjective knowledge***

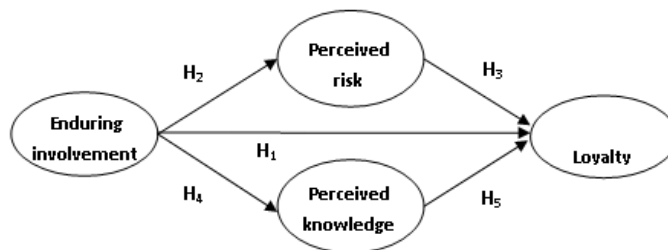
While knowledge was earlier considered to be a unidimensional variable, later it was described as a complex system depending on the information content stored in the memory (Brucks, 1986). Knowledge used in marketing is usually related to products, product classes or brands. The concept of product knowledge (long in the focus of research in the 1980s) is considered to be an important factor of information processing (Raju, Lonial and Mangold, 1993). According to the most popular and most widely accepted view three types of consumer knowledge are to be distinguished (Raju, Lonial, and Mangold, 1993): subjective (perceived) knowledge, objective knowledge, usage experience. Subjective knowledge is the consumer's perception of their

own knowledge. Objective knowledge is the actual amount, type and organization of knowledge. Finally, usage experience - also known as self-perceived knowledge - refers to purchase or usage experience.

### **Research model and hypothesis**

Hereinafter the conceptual model of the study and the hypotheses we have set up and tested are presented (*figure 1*).

**Figure no. 1.** The research model



### ***The effect of enduring involvement on behavioural loyalty***

In the S-O-R model adapted to involvement by Houston and Rothschild (1977) the decisions made during the buying process are influenced directly by situational involvement and enduring involvement has only a moderating role in this relationship. In contrast, Mittal and Lee (1989) in their empirical model assumed and confirmed that enduring involvement has direct effect on different behavioural variables. In the literature situational involvement is viewed as an antecedent of brand loyalty. The theory behind this is that situational involvement evolves when customers perceive some level of risk in the buying context and try to handle that. As a consequence, customers can follow different strategies, typically rely on well-known, formerly used brands, their preferences are formed and choices are based upon their experience (Kolos, 2004).

However, unlike situational involvement, which entails a kind of rational reaction in the buying process, enduring involvement generates an emotional relationship between customers and the given product category. This can have a further emotional effect on the way individuals are going to response to stimuli. For instance, consumers

have favourite brands is higher if they are involved in a particular product category in the long run (Beatty, Homer and Kahle, 1988). Based on these research findings we postulate that by consumers whose enduring involvement higher in a product category as they have spent more time and have paid more attention on that, after a while an emotional engagement to one or some brands within the category will evolve. This leads to the prediction that they will adhere to their favourite brands.

*H<sub>1</sub>: In relation to food products, enduring involvement has a positive effect on behavioural brand loyalty.*

#### ***The effect of enduring involvement on perceived risk***

Houston and Rothschild (1977) assumed that customers with higher enduring and situational involvement will react more negatively to product attributes that do not reach their expectations. The customer who loves travelling and all year continuously plans and prepares for the next journey, feels stronger disappointment if it is raining all the time during the holiday or his luggage is lost or any other negative accidental event occurs than the other one who is not involved in this leisure activity and going on holiday is not a crucial part of his/her life. While the former one strives for perfection and holds to the elaborated travel plan, the latter one can be flexible in case of unexpected negative incidents. As a consequence, individuals with higher enduring involvement perceive higher risk and this can reach a constant higher level regarding the given product/service category, and which is named inherent risk by Bettman (1973). We also targeted to measure this kind of risk and based on the train of thought above we established the following hypothesis:

*H<sub>2</sub>: In relation to food products, enduring involvement has a positive effect on perceived inherent risk.*

#### ***The effect of perceived risk on loyalty***

Brand loyalty is viewed as customers' strategy to handle risk, which can be identified as an antecedent (Mittal and Lee, 1989) or a consequence (Dholakia, 2001) of situational involvement. This role of brand loyalty is supported by studies (Mittal and Lee, 1989; Kolos, 2004) but one could identify several other tools how customers can

lower their own perceived risk, such as intense information seeking, product trial, intra-customers communication, etc. (for further example see Kolos, 1997). Risk-handling strategies, however, can be different in terms of the time and the mental effort they require. In the research we should take the characteristics of food products into account since customers generally make many sequential decisions concerning different product categories within relative short time. When we discuss the efforts required by the risk-handling strategy of customers, in case of food products this can be more serious and this makes customers to choose a general, easily implementable method. We assumed earlier that enduring involvement can lead to a level of perceived risk regarding product categories or food products in general. In similar way the mental reaction of customers to this risk can stimulate general application of simplified processes and decision-making patterns across food categories.

*H<sub>3</sub>: In relation to food products, perceived inherent risk has a positive effect on behavioural brand loyalty.*

#### ***The effect of enduring involvement on subjective knowledge***

In previous studies researchers concluded that involvement and knowledge are positively correlated since customers with higher involvement proved to be more intense information seeker that increases their knowledge about the objects. This link between these constructs was later also verified (Bei and Heslin 1997). The authors found that individuals who are more involved in a product category make worse decisions than others who are less involved in but possess more knowledge about that. Celsi and Olson (1988) argued that the involvement and the perceived knowledge related to food products are in causal relation since knowledge acquisition about the object supposes a certain level of interest. Based on this, we have a similar hypothesis, which assumes:

*H<sub>4</sub>: In relation to food products, enduring involvement has a positive effect on subjective knowledge.*

#### ***The effect of subjective knowledge on loyalty***

Customers with higher knowledge are able to distinguish the brands' potential performance even if there are only minor differences

between them, so they could increase the mental barrier to substitution possibilities. In this way the higher knowledge can lead customers to remain loyal. In addition to that perceived knowledge can strengthen the confidence and customers can feel a kind of justification of their former brand decisions and reinforce similar behaviour. Individuals with less perceived knowledge can be uncertain about the quality of the products selected and tend to try other alternatives. Therefore, we assume that perceived knowledge has a positive effect on loyalty.

*H<sub>5</sub>: In relation to food products, subjective knowledge has a positive effect on behavioural brand loyalty.*

### **The research method**

We used an online questionnaire among university students (n = 167). The administration was anonymous and voluntary. The respondents were awarded extra course points above the regular ones to increase response rate.

The constructs included in the research model were measured on five-point Likert-scales where 1 = “strongly disagree” and 5 = “strongly agree”. Each scale of the constructs involved three items, that is, we have had altogether twelve items evaluated. In case of three constructs we adapted general, internationally published scales to food products (enduring involvement: a reduced version of Zaichowsky, 1985; perceived risk: risk dimension of CIP-scale, Laurent and Kapferer, 1985; perceived knowledge: scale by Flynn and Goldsmith, 1999). The food-related behavioural loyalty-scale was developed by the authors.

We tested the discriminant validity of scales by the criteria suggested by Fornell and Larcker (1981) that is the indicators of a construct should explain higher variance in it than any other construct in the model tested. The AVE values (table 1) exceed ones what we get if we square the standardised coefficients in the structural model (figure 2), so discriminant validity is confirmed. We also tested the inter-item reliability with the help of coefficients alphas, which showed acceptable values (between 0.691 and 0.892; see table 1).

To verify our empirical model we applied structural equation modelling (SEM) with AMOS 18.0 software package. SEM is the extension of the general linear models (GLM), which can test multiple regression models in parallel. In SEM there are several prerequisites to the analysis. According to Bentler and Chou (1987) in the frame of a



SEM-analysis the minimum expected sampling size is the fifth as much as the number of parameters to be estimated. As the model we established has 29 parameters, therefore, the expected number of respondents is 150. We just managed to meet this requirement with our sampling size of 169. Different fit indexes have also been developed by the researchers for SEM-analysis. In table 2 we present the most widely used ones, their critical values and our empirically estimated ones of the tested model. The results show that the model fits fairly well.

**Table no. 1.** Study measures

Scale items	Item-to-total correlation	Indicator reliability	T-value of factor loading
<b>Enduring involvement</b> (AVE: 0.597; Composite Reliability: 0.798; Cronbach's $\alpha$ : 0.794)			
Food interests me	0.578	0.44	8.39
Food is important to me (r)	0.613	0.59	9.30
Food has great significance to me	0.744	0.76	12.59
<b>Perceived risk</b> (AVE: 0.607; Composite Reliability: 0.705; Cronbach's $\alpha$ : 0.691)			
It is really annoying to purchase a food product that is not suitable	0.538	0.47	7.43
I would be really upset if the food brand I choose prove to be poor	0.422	0.59	5.83
When you buy a food product, it is not a big deal if you make mistakes (r)	0.563	0.76	7.88
<b>Brand loyalty</b> (AVE: 0.553; Composite Reliability: 0.779; Cronbach's $\alpha$ : 0.767)			
In most food categories I generally insist on a brand I used to.	0.708	0.81	11.21
In most cases, I buy the same brand within a given food category	0.580	0.48	8.33
Until I am not disappointed by a food brand, I intend to buy it again	0.522	0.37	7.39
<b>Subjective knowledge</b> (AVE: 0.733; Composite Reliability: 0.893; Cronbach's $\alpha$ : 0.892)			
I know pretty much about food	0.804	0.74	13.67
When it comes to food, I really know a lot	0.815	0.85	14.10
I feel very knowledgeable about food (r)	0.747	0.61	11.88

**Table no. 2.** The critical and empirically estimated values of fit indexes

Fit indexes	The critical value suggested by the literature	The empirical value in the current research
$(\chi)^2/df$	$\leq 2$ (Tabachnick and Fidell, 2007)	1.241
<b>TLI</b> ( <i>Tucker-Lewis Index</i> )	$\geq 0.95$ (Sharma et al., 2005)	0.980
<b>CFI</b> ( <i>Comparative Fit Index</i> )	$\geq 0.95$ (Hu and Bentler, 1999)	0.985
<b>RMSEA</b> ( <i>Root Mean Square Error of Approximation</i> )	$<0.06$ (Hu and Bentler, 1999)	0.038

### Findings

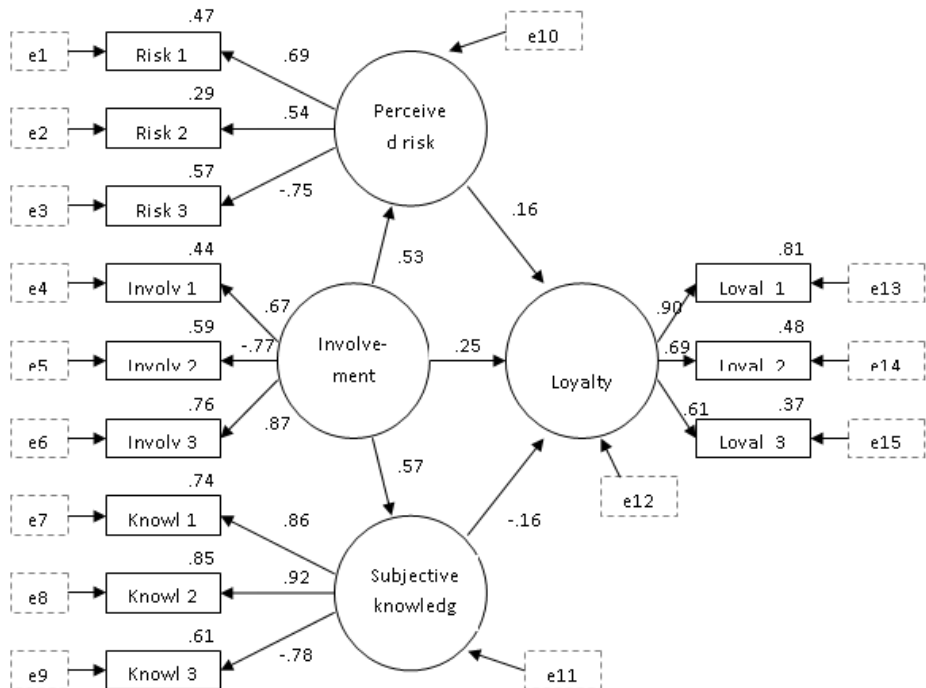
After we determined that our model meets the fitting criteria we can turn to the interpretation of the estimated parameters. As it is presented in figure 2 and table 3, the standardized regression coefficients indicate a strong relationship between enduring involvement and the two assumed mediating variables, perceived risk ( $\beta = 0.53$ ) and knowledge ( $\beta = 0.57$ ).

In contrast to involvement, in case of behavioural loyalty we measured a weaker association with the mediating variables. Perceived risk and behavioural loyalty show a positive relationship but only a small part of the variance of the dependent construct was explained ( $\beta = 0.16$ ). Between subjective knowledge and behavioural loyalty we also measured a weak relationship but in addition to that, contrary to our hypothesis, this association proved to be negative ( $\beta = - 0.16$ ). We managed to reveal relatively stronger relationship between involvement and loyalty ( $\beta = 0.25$ ).

The unstandardized regression coefficients show the estimated difference in the dependent variable caused by a unit difference in the

predictor. We can test if the value of these coefficients is unequal to zero, which verify significant association between the constructs. The results show that at a confidence level of 99%, enduring involvement has an effect on perceived risk and perceived knowledge but support the relationship with behavioural loyalty only at a confidence level of 90%. Note that the sampling size plays influential role in the statistical hypothesis testing, therefore, the results can be the reflection of our relatively small sampling size.

**Figure no. 2.** The research model and its estimated parameters



For the managerial implications it is crucial information that to what extent the target variables can be captured by the predictive ones in the model. We got the lowest value in case of loyalty, contrary to that this construct has the highest number of predictors. Enduring involvement, perceived risk and perceived knowledge explain only 9.4% of its variance ( $R^2=0.094$ ).

The role of mediating variables having only one predictor can be determined by the squared standardized coefficients estimated between

them, according to which involvement explains 28.4% of variance of perceived risk and 32.4% of that of perceived knowledge.

**Table no. 3.** Unstandardized regression coefficients and their significance level

Predictive variable	Target variable	Unstandardized regression coefficients (b)	Standard error of the coefficients	Significance level	Standardized regression coefficients (β)
Involvement	Loyalty	.259	.144	.073	.25
Involvement	Perceived risk	.487	.105	.000	.53
Perceived risk	Loyalty	.180	.140	.197	.16
Involvement	Subjective knowledge	.649	.110	.000	.57
Subjective knowledge	Loyalty	-.145	.101	.149	-.16

Based on the results, all the three hypotheses including involvement were supported, that is, enduring involvement has a positive effect on both loyalty (only at a confidence level of 90%) and the two supposed mediating concepts, perceived risk and perceived knowledge. Their mediating role was not supported since we did not found significant association between them and loyalty.

**Table no. 4.** Hypotheses testing results

Hypothesis	Predictive variable	Target variable	Evaluation
(H) <sub>1</sub>	Involvement	Loyalty	Supported*
(H) <sub>2</sub>	Involvement	Perceived risk	Supported**
(H) <sub>3</sub>	Perceived risk	Loyalty	Rejected
(H) <sub>4</sub>	Involvement	Perceived knowledge	Supported**
(H) <sub>5</sub>	Perceived knowledge	Loyalty	Rejected

\* p = 0.1 level; \*\* p = 0.05 level

## **Discussion**

The aim of our study was to elucidate the nature of the relationship between involvement and loyalty. To get deeper insight, we wanted to explore the role of potential mediating concepts. In our conceptual model we made effort to determine the subjective and relatively constant effects and relationships on the one hand, and measure general predictive constructs that can be interpreted to foods in general on the other hand. With the help of our empirical model we tried to achieve a better understanding of the decision-making mechanism in the buying process. After testing our research model we can conclude that our objectives were partly accomplished. Among the five hypotheses only two were supported, one only by lower confidence, and the two remaining ones were rejected since the lack of identified statistically significant association.

With respect to results, involvement plays an important role in this context and explains notable proportions of the variance of the other construct included in the model. We managed to verify its indirect effect on behavioural loyalty, although, a weaker association was determined than expected. The relative constant perceived risk and perceived knowledge related to foods also well explained by enduring involvement. However, the mediating role of the two supposed concepts was not supported by our study, therefore, behavioural loyalty in general was not explained significantly by our conceptual model. All of this indicates the more complex nature of the decision-making mechanism of customers and suggests further, explorative research directions towards the subfield of the buying process related to food products. Nevertheless, we believe that the study above contributes to the research area and provide useful inputs for other research projects.

## **Limitations and further research directions**

Some important limitations of this study must be emphasized. First, the sample we drew is a special one including only university students, whose food related consumption and buying behaviour can be distinct. They can apply different heuristics than the whole population. Second, the sampling size was relatively small and, although it met the minimum requirements in them SEM-analysis, it could mainly influence the results of hypothesis-tests. Third, the investigation took food

categories into account as a whole assuming similar patterns in each decision-making process. This, however, can be diverse across product categories and from this point of view we measured average effects. Beside the limitations above the results cannot be generalised to other product groups due to the special characteristics of the food products albeit it was not the aim of the research this time.

As mentioned during the discussion, the results indicate the need for a further explorative study in this field to reveal other potential mediating and/or moderating concepts and special chain of effects. After this phase can be evaluated that despite the additional concepts the research model remain coherent or it is necessary to focus on some parts of it.

An issue that is worthy of investigation is how the explanatory power of the model can change if one focuses the measurement on specific product categories instead of all of them as a whole. It can reveal additional, category-specific factors that can influence the strength of associations within the model.

The literature pays lower attention to the dynamics of the concepts included in the model. The intensity of involvement can change, as perceived knowledge and risk as well. The interaction between them in time can hide interesting effects that can be worth exploring, too.

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