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The change of consumers' behavior in crisis conditions: A psychological approach to the empirical evidence from Romania

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The purpose of this article is to analyze the causal relation between the psychological factors of behavior in risk-generating situations and the change of consumers' behavior in the context of nowadays economic crisis. In order to test the conceptual model of behavior change in uncertain conditions developed, the empirical data were collected according to a sample of 527 Romanian consumers during April, 2010. The results of the study emphasize the starting premise, that is, in nowadays economic crisis, there is a direct causality relation between the perception of the risks, the risk-generating situation aversion and the change of consumers' behavior. The results reveal, though, the fact that the psychological factors considered within the conceptual model do not influence on the same scale the change of behavior. The limits of the research arise from the perishable topic itself, because the dimensions of the identified segments as well as the profile of the behavioral change vary according to many identified factors. This study brings its contribution to the understanding of the change of consumers' behavior in economic crisis conditions by using a new perspective unexplored by the literature in the field until now.

Key words: Economic crisis, risk perception, risk aversion, consumer's behavior change.

INTRODUCTION

As Stegaroiu and Stegaroiu (2010) argue that currently the world economy is facing a disaster whose futures remain a mystery, the nowadays economic crisis began as a financial crisis in the United States in 2008. Most of the economic analysts identified the speculative bubble and the greed of the companies as the generating causes of the crisis.

An interesting aspect in the context of present global economic recession is the fact that a certain type of crisis generated the emergence of another type of crisis. If at the end of 2008, the majority of economic experts provided pessimistic forecasts regarding the evolution of national economies in 2009, they did not suggest anything about the social crisis generated by the effects

of the recession, for example.

Within the conference "Crisis of Confidence: The Recession and the Economy of Fear", organized by the Psychiatry and the Psychoanalytic Center, in 2009, the following aspect was pointed out: the emotion did not drive America into recession but it could contribute essentially to its duration." Thus, consumers' emotional response to the effects of the financial crisis conducted to a lower level of confidence into brands, companies, industries, etc. In other words, the emotion generated the appearance of the lack of confidence crisis. This is advocated, for example, by the decrease of Consumer Confidence Index in the entire world at the end of 2008, according to Nielsen Global Consumer Confidence Index Report (2009). The report emphasizes that some domestic markets achieved an absolute record as the lowest CCI at the end of 2008. At the same time, Quelch and Jocz (2009) point out that, in general, consumers' behavior was determined by emotional reactions against the recession.

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The effects of the financial crisis, doubled by the lack of confidence crisis had as a result, the consumption decrease, people's choice for savings being a correct reaction to uncertainty – the perspective of domestic economic evolution. Consumption decrease engendered markets' contraction and emergence of the classical overproduction crisis. In this way, the emotion played an important part in the transformation of the financial crisis into a global recession. According to some experts, the lack of confidence crisis could cause a prolongation of the recession. On the other hand, the income shortage has both economic and social outcomes affecting the social relations as well as the individuals' behavior and inducing the social crisis (Walton and Mannelyan, 1998).

Thus, the number of those professing that they can no longer afford almost anything has significantly increased during the last two years on almost all domestic markets. At the same time, the number of poor people was augmented, causing important social upshots.

Last but not least, as Ronn Anderson points out, unemployment generates what he calls "the loss of social capital". Social capital represents an individual's capacity to be part of the society and interact with the members of the group he lives in. According to the results of some empirical research, between unemployment, depression and anxiety, there is a direct causal relation. A person laid off not only loses his/her position within the community, but also the capacity of interaction with the members of the respective community. The loss of the social capital affects both the individuals and the entire community (Brand et al., 2008).

LITERATURE REVIEW

According to Dutt and Padmanabhan's (2009) study, there were 435 currency crises episodes across 195 countries over the period 1960 to 2006. Thus, at an international level, there are a large number of studies achieved in the context of various crisis periods, many of them having as a purpose, the identification of core changes occurred in consumers' behavior and in spending schemes as a result of the exposure to economic impact generated by the crisis. The researchers had various manners of approaching the topics.

One of the first relevant studies was made by Kelly and Schewe (1974), which analyzed the reaction of American consumers towards stagflation during 1973 to 1974. The main directions pursued within this analysis were consumption vs. savings, postponing important purchases, extensive credit usage, and change of lifestyle. Shama (1980) analyzed this change for New York consumers and emphasized the fact that the recession determined the change of consumers' motivations, values, attitudes and expectations. The core changes identified by him at the level of consumers' behavior were: the desire to buy less (the decrease of consumption desire), the

postponing of long-lasting product purchase, the focus on comparing the products and an extension of purchase duration, the change of purchase habits and waste riddance.

Many researchers examined the consumers' reaction to economic impacts generated by the Latin American crisis. Friszbain et al. (2003) identified more types of strategies adopted by households in Argentina during 2001 to 2002, the most difficult period in the history of this country. The strategies identified by them were separated in groups according to the type of household response to the economic crisis. The first group of strategies called adaptive strategies, covers in fact, a reactive response of the household with a view to quantitative and qualitative consumption. The second group of strategies called active strategies, engender a proactive response of the household, focusing on home goods production for selling, entrance on the labor market of a new member of the household, at least one member of the family begins to work longer hours, at least one member of the family emigrated or relocated permanently in another city, another province, etc. The third group of strategies called social network, consists essentially in searching for living support provided by people outside the household. The aforementioned authors analyzed if between the strategies identified and the type of economic shock experienced by the household, there is a direct connection and if the change of household behavior vary according to the wealth and number of members of the respective household.

Robles et al. (2002) identified within the context of the same crisis episode, the following changes in Argentinean consumers' behavior: the avoidance of long-term financial commitments by leaving out major purchases: cars, houses, holidays, etc., the re-evaluation of consumption mix by increasing expenses for basic products, the change of purchase habits by guiding the consumers toward self-service, discount outlets and supermarkets, the search for a favorable quality-price balance. In broad lines, the same main directions in consumers' behavior change were identified by Zurawicki and Braidon (2005) in a research made with the purpose to identify middle-class Argentinean consumers' reaction between 2001 and 2002.

The Asian crisis that affected the entire region came after a very long boom period, taking by surprise all consumers, represented the research theme for many researches. Ang et al. (2000) identified the following behavioral changes within the Asian crisis: a lower consumption for all product categories and waste riddance, the search for extra information, the substitution of products, the buying of home products rather than foreign products, the choice of discount and neighborhood shops.

The nowadays recession without precedent in the entire world, called for all home consumers' attention upon revising their behavior and budget allotting. Quelch

and Jocz (2009) pointed out that in nowadays context and during recession times in general, market segmentation as per sociodemographic criteria can be less relevant than the psychological segmentation that considers the emotional reaction to economic environment.

Urbonavicius and Pikturnien (2009) emphasize that in nowadays context, consumers' behavior is emotional, and identified six types of responses: 1) to continue with the same behavior without any change – this type of behavior does not imply changes at the level of high income consumers who do not undergo but very scarcely the effects of the crisis; 2) to reduce spending in order to survive – this type of response implies significant alterations of consumers' behavior by a blunt reduction of the quantity and quality of the products consumed as it characterizes the consumers who are fully affected by the recession; 3) to reduce spending in order to make some savings – is a feature of the consumers whose budgets were not significantly affected but choose to become cautious for purchases that are not essentially necessary and they prefer to save money; 4) to concentrate on short-term increase of life quality, as long as it can be afforded – this type of response characterizes the category of young people free of financial and social obligations; 5) to improve life quality by consuming more products and services – this response implies the increase of consumption of certain categories of products and services, increase stimulated by the decrease of prices for different products; and 6) improve life quality by consuming better quality products and services – this response means that consumers are driven towards better quality products.

As one can notice, at international level, there are many studies that provide a series of answers to the following question: "how does the consumers' behavior change in crisis conditions?" But no study has analyzed the causal relation between the psychological factors and the change of consumers' behavior in recession episode, although many researchers point out that consumers' response in such a context is rather emotional than rational. Regarding this issue, Goldmen (2003) emphasized the effects of the destructive emotions.

The development of the conceptual model

We started from a broader frame in order to determine the core factors that generate the change of consumers' behavior in nowadays global hectic context. We analyzed several research studies made in the context of various crises: economic crisis (Kelley and Schewe, 1975; Shama, 1978, 1980; Shipchandler, 1982; Ang et al., 2000; Ang, 2001; Zurawicki and Braidot, 2005; Dutt and Padmanabhan, 2009; Garling et al., 2009; Fiszbein et al., 2003; Qelch and Jocz, 2009; Robles et al., 2002; Kittipapas, 2002; Stegaroiu and Stegaroiu, 2010; Urbonavicius and Pikturnien, 2010), food security crisis

(Miller and Reilly, 1994; Pennings et al., 2002; Jin and Koo, 2003; Lusk and Coble, 2005; Kalogeras et al., 2008; Wansink, 2004), terrorism crisis (USA, 2001), public health security crisis (Saad, 2009). The purpose of this analysis was to discover to what extent these situations with negative impact on people (risk-generating situations) display some common aspects regarding the change of behavior. The results of the analysis pointed out that obviously, no crisis is similar to another as no two similar crisis are alike, considering generating factors, evolution, outcomes, severeness, etc. Still, an interesting aspect of the analysis was the fact that in all risk-generating situations, the psychological factors play an important role in determining the change of human behavior.

Risk-concept is very often used in present days in various circumstances: health, investments, terrorism, economic trends, food security, strategy, and long lasting business). In psychology, risk is defined as a subjective construct influenced by how the event is interpreted (Weber and Milliman, 1997). As Hillson and Murray-Webster (2007) point out, there is a great range of definitions for risk-concept in the academic literature. Nevertheless, there is consensus within various approaches as to the fact that risk is associated with uncertainty and generates consequences. The current crisis is labeled as uncertain and risk generating situation (economic shocks) with significant effects on consumers on all national markets. Zurawicki and Braidot (2004) defined the economic crisis from consumers' perspective as the most traumatizing event that affects family's life and brings a sudden and substantial deterioration of economic situation.

Akerlof and Shiller (2009) emphasized that a growing number of economists recognized that a psychological perspective is necessary in economic analysis. Thus, considering that the crisis psychology is a main part of the present global economic crisis and that the psychological factors play an important role in the change of consumers' behavior we developed a conceptual model of behavior change in uncertainty conditions. This conceptual model presents how panic works in uncertain situations.

Unemployment, inflation raise, the freezing or decrease of salaries, the decrease of purchasing power, and the decrease of deposits are only a few of the economic shocks that consumers currently have to cope with, risks respectively, as long as such evolutions represent "uncertainties that matter" (Hillson, 2002; Hillson and Murray-Webster, 2007), having important effects on individuals' lives. Within our model, the economic shocks represented stimuli that we labeled as risks. Each risk is perceived and interpreted (represented) differently by each and every individual, which is the assessment of the degree of situational uncertainty, controllability of the uncertainty, and confidence in these estimates (Sitkin and Weingart, 1995). Risk perception is the interpretation that an

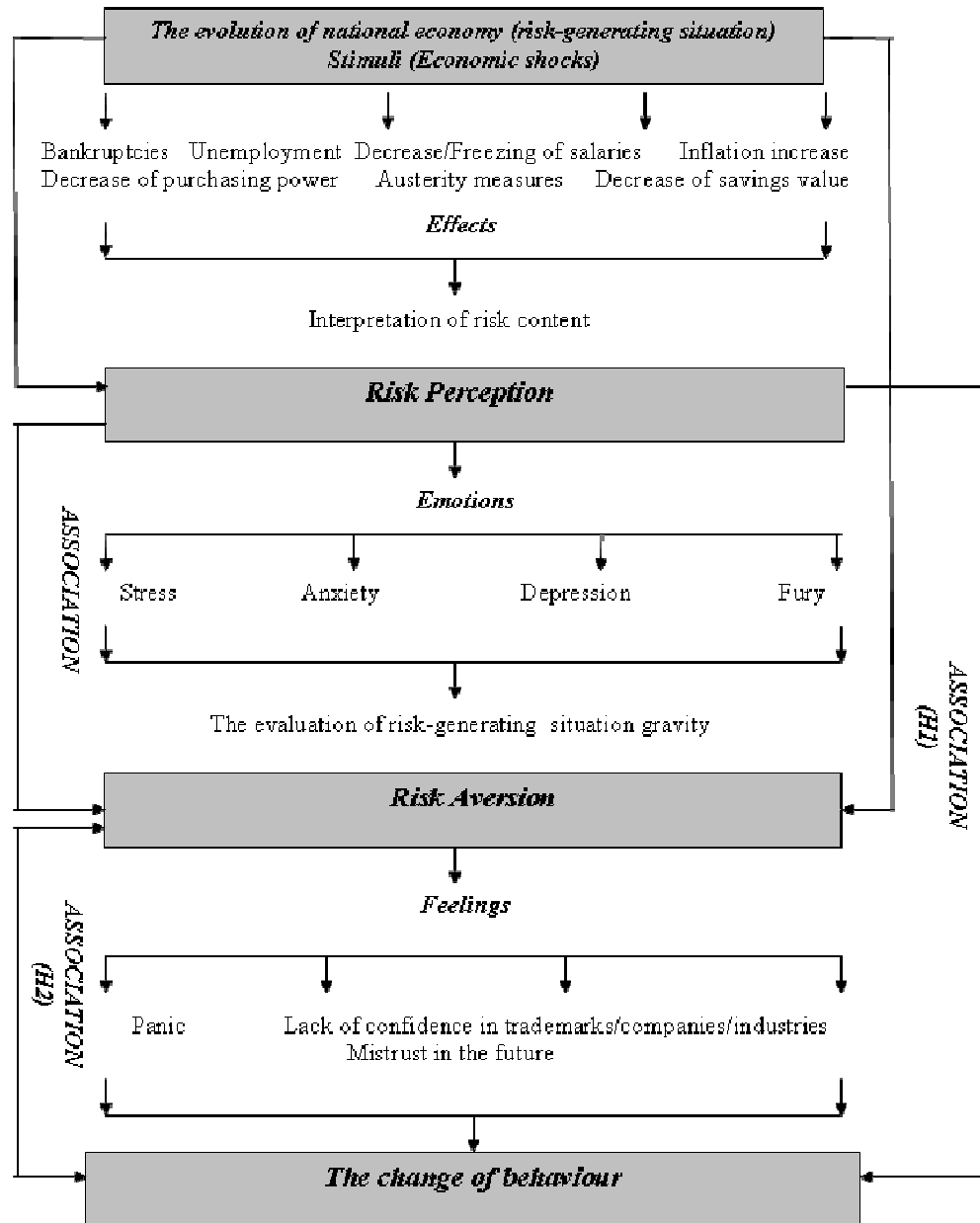


Figure 1. Conceptual model regarding the change of consumers' behavior in risk-generating situations (uncertainty) (source: authors point of view).

individual makes with a view to the chances to be exposed to risk content (Pennings et al., 2002) and to the estimated capacity to control the exposure, for example, the extent to which the individual considers himself liable to unemployment and the control degree of this situation. This personal interpretation generates emotions such as panic, anxiety, stress, fury, etc. On the other hand, each individual likes/ dislikes in a certain measure the risk-generating situation, reflecting each person's risk-attitude that leads to certain feelings such as panic, confidence/ lack of confidence in brands, companies, government, media, future. Risk-attitude is a hypothetical construction

reflecting whether the individual likes or dislikes risk-generating situation and risk aversion. Thus, risk aversion is a mental projection of a certain situation (Hillson and Murray, 2007). Finally, in uncertain situations, the change of consumers' behavior is determined by risk perception and risk generating situations aversion (Figure 1).

But not all individuals are alike and they do not react identically in a risk-generating situation, such as the recession. That is why the change of consumers' behavior is not expected to have the same intensity and follow the same directions. Thus, it has been empirically proven that people make appreciations about the chance

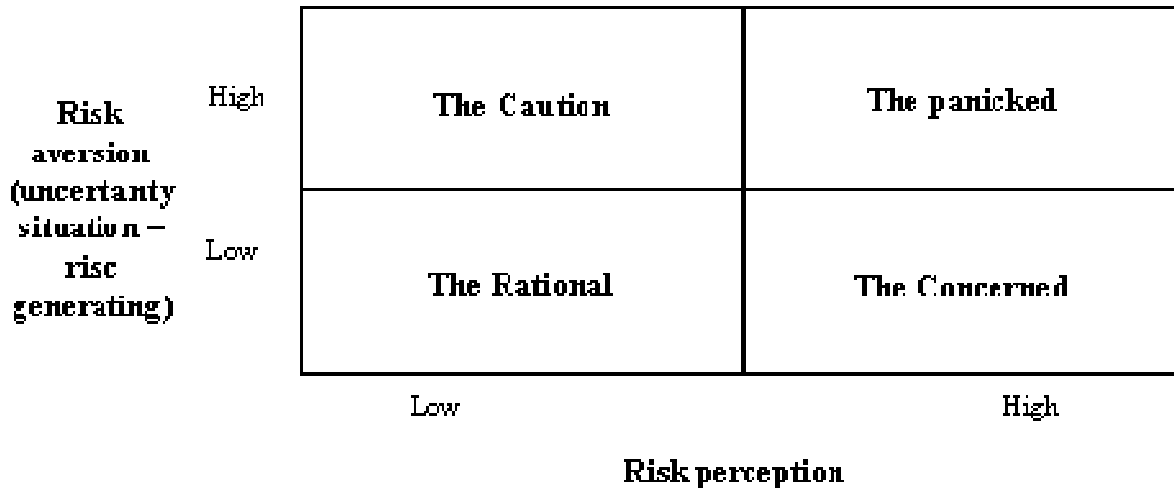


Figure 2. Conceptual model regarding the psychological segmentation of the market. (source: Authors personal contribution using Pennings et. al (2002), Lusk and Coble (2005) models).

of being exposed to the content of the same risk. Starting from the models presented by Pennings et al. (2002) and Lusk and Coble (2005) as to the consumers’ reaction in risk conditions, we decomposed consumers’ behavior in two psychological dimensions considering the manner in which they interact. We tried to obtain a clearer image of the intensity and change directions at the level of behavior in nowadays economic crisis (Figure 2).

The dynamic of the segments

When people interpret the content of a risk in order to evaluate how bad a present situation is, they use their previous experiences. When such a previous experience exist in the recent history of a national economy, the consumers’ response will be built on a learning lesson as they tend to assess the gravity of the situation more correctly. Should such an experience be absent, the consumers will have the tendency “to project the worst of their fears” (Anderson, 2009) in order to make this evaluation. Thus, their response will be an emotional one considering that there is no past previous context to allow them to place such events. This is emphasized by Zurawicki and Braidon (2004) in their research paper regarding middle-class consumers’ reaction in the context of the crisis in Argentina (2001 to 2002). They make a clear point that in the case of crisis in Asia (1997 to 1998), the consumer was taken by surprise, considering that nobody anticipated the crisis which occurred after a long period of economic development; therefore, the consumers had no previous context to rely on. On the contrary, Argentinean consumers accumulated experience regarding the “correct” reaction in recession conditions considering the economic reforms of the 1990s envisaging the liberalization of the markets that led

to a decrease of life standard and change of consumers’ behavior. Therefore, they were in a much better position for a correct evaluation of the gravity of the situation in the context of 2001 to 2002 crisis.

On the other hand, the dimension of the four segments alters according to the evolution of the economic crisis – entering into recession, the bad situation of the national economy, the climax of the recession, the signs of recovery and total overcome of the crisis. Thus, risk perception and risk-generating situation aversion alters in time according to this evolution. Also, the dimensions of the segments vary from one national market to another according to the severe effects of the economic crisis (how badly the national economy was affected).

Not least, considering that in economic crisis conditions, the pessimism grows in accordance with the reaction of the government through anti-crisis measures, the dimensions of the four segments vary according to the moment when the austerity measures were taken and to the severeness of these measures. A good example in such a case is Greece, where the austerity measures adopted conducted to general strikes and violent riots. At the same time, Romania’s case is a good example considering that by the end of May, 2010, the government adopted the most severe austerity measures in the European Union which contributed to the lowest consumers’ confidence index recorded in July, 2010, that represented the highest diminishing during the last ten years according to a study made by GfK (2010). In spite of the fact that the austerity measurements were more severe in the Romania case compared with Greece, the Romanians reaction was moderated. This can be explained by the uncertainty avoidance dimension that characterizes the two cultures. According to the Hofstede’s (2004) study, Greece is the most risk avoidance culture recording a uncertainty avoidance

index (UAI) of 112, while Romania has a UAI of 90. As Gärling et al. (2009) emphasized, the way people behave, their attitudes and values, and the way they perceive themselves, are functions of cultural, historical, and political influence. Considering the austerity measures as stimuli which generate people reaction, consumers' response will be determinate by the individual capacity to cope with unpredictability, and as Hofstede and McCrae (2004) demonstrated, this capacity varies from one culture to another. Thus, we can conclude that the dimensions of the four segments vary to one national market to another function to cultural factors.

In conclusion, the dimensions of the segments vary from one national market to another as per the severeness of the economic crisis effects (S), experience/ lack of experience of some previously experienced economic crisis in the relatively recent history of the national economy (E) the moment of the crisis (T) the moment when the government adopted the austerity measures and the severeness of the measures (AM) and cultural factors (CF):

$M_s = f(S; E; T, AM, CF)$

Establishing hypotheses

The present study is an exploratory one, based on the premise that psychological factors play an important role in the change of consumers' behavior in nowadays economic crisis context (uncertain conditions). Therefore, its purpose is to examine the causal relation that develops between the two psychological factors considered within the conceptual model developed and the change of consumers' behavior:

H₁: There is a direct relation of causality between risk perception and the change of consumers' behavior in recession;

H₂: There is a direct relation of causality between risk-generating situation and the change of consumers' behavior in recession.

RESEARCH METHODOLOGY

Starting from the previous models, the diagnosis analysis for identifying the main changes of consumers' behavior focused on the directions in Table 1. For data collecting, a questionnaire was used as work instrument. It had a number of 26 questions adjusted to the established diagnosis directions of the analysis. 25 of them are close questions and one is open (word association). For the purpose of measuring the psychological and behavioral variables a five steps scale was used: 1 - to a low extent, 3 - to an average extent, 5 - to a great extent. For the purpose of analyzing the evolution of the expenses for the main categories of products and services in the last six months, compared to the previous period, a seven steps scale was used where 1 - much less, 4, in-between, 7 - much more. The data were collected during April, 2010, at a level of a 527 person's sample.

In this research, validity was achieved by reviewing the academic literature in the field about economic crisis, economic psychology, consumer behavior, etc. A workshop was also conducted, and thus, expert opinions were consulted. In order to check the internal consistency of the measurement scale, we used Cronbach's alpha. The Cronbach's alpha assessed was 0.76, greater than acceptable standard value of 0.70.

RESULTS

Despite the optimistic forecasts made by different analysts regarding Romania's economic evolution in 2010 as well as Romania's government optimism, Romanians are more pessimistic regarding this topic, according to the results of the research. This is pointed out by the fact that a great majority (89.4%) of respondents acknowledge that Romania will not overcome the recession in 2010; 90.3% think that there will be no recover of the national economic situation in the next six months.

Considering the forthcoming six months, a great number of respondents (61.1%) acknowledge that they will be exposed to the consequences of the economic crisis, to a great extent. This is emphasized by the average (3.58) and the median (4.00) perception of depression outcomes (risks). At the same time a great majority of respondents (81.0%) acknowledge that the evolution of the national economy is highly dissatisfactory.

At present, the obvious pessimism is an important factor that adjusts Romanian consumers' behavior. This is pointed out by the words used by the respondents to define the situation of the present national economy; out of 1028 words, 998 represent negative associations, such as: "prospectless", "instability", "disorientation", "disaster", "delicate situation", dramatic situation, "decrease", "chaos", and only 30 words represent neutral or positive associations such as: "recover", "increase", "acceptable situation", "I do not believe in depression", etc. Negative associations emphasize not only respondents' pessimism but also the panic feeling that was fueled by the economic shocks that the respondents experienced during the last six months: unemployment, the decrease of their income, the decrease of savings value, the decrease of purchasing power, etc.

Considering the volume of data basis, we used K-means cluster analysis in order to establish the segments. The number of initial clusters (settled according to the conceptual model of psychological segmentation of the market) was 4. The initial centroids of the clusters were a random choice made by SPSS after which within each reiteration the grouping of the cases was made according to the closest Euclidian distances to the centroid of the recalculated clusters. Practically, within this algorithm, one focuses on the minimization of the variation inside the cluster and the maximization of the differences between the clusters. After six reiterations, the final convergent value was reached according to

Table 1. Diagnosis for identifying changes in consumers' behavior.

Directions for accomplishing the diagnosis analysis	Variables measured
The evaluation of the perception regarding the evolution of the national economy in 2010	<ul style="list-style-type: none"> i. Getting Romania out of the economic crisis in 2010 ii. The recover of the national economy within the next six months
The evaluation of the economic socks experienced by the population	<ul style="list-style-type: none"> i. Unemployment ii. Decrease of the incomes iii. Freezing of the incomes iv. Decrease of purchasing power v. Decrease of the savings/ investments value
The evaluation of risk perception over the exposure to the effects of the economic crisis and of risk aversion – the evolution of the national economy	<ul style="list-style-type: none"> i. Risk perception – the exposure to economic socks within the next six months ii. Aversion against the evolution of the national economy
The evaluation of the behavior change directions in the last six months, compared to the previous period	<ul style="list-style-type: none"> i. Consumption vs. savings ii. Migration towards the low demand curve iii. Elimination/ postponing of major purchases iv. Aggressive search of options v. Product choice according to the price vi. Product choice according to the quality vii. Approach of new innovative products
The analysis of expense trends for the main group of products and services in the last six months compared to the previous period	<ul style="list-style-type: none"> i. Basic food products ii. Other food products iii. Alcoholic drinks and tobacco iv. Personal care products v. House maintenance and improvement vi. transport vii. water, gas, electricity viii. magazines, newspapers, books ix. garments and shoes x. long-usage products xi. voyages, holidays, leisure xii. pharmaceutical products and medical care
The evaluation of population's confidence degree	<ul style="list-style-type: none"> i. in trademarks/ products ii. in companies/ business environment iii. in government and anti-crisis measures iv. in the manner in which media reflects the evolution of the recession

the results in Tables 2 and 3.

The psychological and sociodemographic profile of the clusters

Using the final results of the reiteration process as well as cross tabulation, we provided the psychological and sociodemographic profile of each cluster:

Cluster 1: the 'panicked' are those consumers thinking that within the next six months, they will be highly affected by the consequences of the economic crisis and the evolution of the national economy is extremely dissatisfactory from their point of view. This cluster is made up of employees with an income below \$ 250(53.5%); retired persons considering that 65.7% of members of the sample belong to this cluster; unemployed persons considering that out of 67 of the respondents 49 are

Table 2. The centroids of the final clusters generated by SPSS.

Psychological factor	Clusters			
	1	2	3	4
Perception on the outcomes of the depression generated by the evolution of the national economy	4.38	2.42	3.70	1.67
Aversion to the evolution of the national economy	4.70	4.64	2.43	2.33

Table 3. The number of cases grouped in each cluster.

Cluster	Number of cases	Percent	Profile
1	282	53.51	The Panicked
2	145	27.51	The Concerned
3	67	12.72	The Cautious
4	33	6.26	The Rational
Total	527	100	100%

'panicked' who acknowledged that they were affected by unemployment in the last six months. They are approximately the same number of men and women, the proportion of men being a little higher (51.5%). The 'panicked' are first of all, individuals with a low level of education, 81.5% of the total respondents graduated secondary schools and 76.2% vocational schools and they both are concentrated on this segment, they come from rural area considering that 67.0% of the respondents coming from rural area on the entire sample are concentrated on this segment. An interesting aspect is that 20.3% from the respondents professing that they were not affected by the consequences of the depression are 'panicked'.

Cluster 2: the 'concerned' are those consumers thinking that in the next six months they will be scarcely affected by the consequences of the economic crisis and the evolution of the national economic situation is deeply dissatisfactory. This cluster encompasses firstly, employees with a monthly income under \$ 250 (28.3%) or ranging from \$ 251 to 500 (37.9%), students (17.9%), entrepreneurs/ freelancers (10.3%), retired persons (11%). The majority of the 'concerned' graduate high-school is 41.4%, a higher education institution (41.4%) or post-graduate courses (6.2%). An interesting aspect is the presence of respondents acknowledging that they were not affected by the consequences of the depression. Thus, 36 respondents belong to this cluster out of 79 of the entire sample.

Cluster 3: the 'cautious' are those consumers thinking that within the next six months they will be highly exposed to the consequences of the economic crisis and the evolution of the national economic situation scarcely displeases them (high risk aversion). This segment encompasses employees (67.3%) with a monthly income

ranging from \$ 200 to 500 (47.8%) or over \$ 500 (19.4%) as well as entrepreneurs, considering that 18.4% from the total number of entrepreneurs of the sample belong to this cluster. The presence of entrepreneurs shows the impact of the recession on business environment and the difficult problems they have to cope with for surviving in the context economic crisis. The 'cautious' are both men (49.3%) and women (50.7%) coming mostly from urban areas (65.7%). Most of them graduated high-school (55.2%), and higher education institutions (28.4%).

Cluster 4: the 'rational' are those consumers thinking that within the next six months they will be scarcely affected by the consequences of the economic crisis and have a low aversion for the evolution of the national economy. The respondents belonging to this cluster are employees (63.6%) with a monthly income ranging from \$ 500 to 700 or more (46.4%), as well as those who professed that they were not affected by the consequences of the recession. Most of the 'rational' are men (57.8%) and come from urban areas (95.6%). Those who graduated high-school were 40.0% and higher education institution was 48.9%.

The change of behavior at the level of clusters

The profile of behavioral change for each cluster was made with the help of cross-tabulation (Table 4).

i. The 'panicked': during the period analyzed (the last six months), compared to the previous period, the main tendency within this cluster was to reduce the consumption. This is revealed by the fact that 69.86% from the 'panicked' acknowledged that although they consume less, they do not succeed to save almost anything, therefore, the decrease of consumption was

Table 4. Descriptive statistics – the mean value of the behavior change at the level of clusters.

Directions of evaluating behavior change	Mean value at the level of clusters			
	The Panicked	The Concerned	The Cautious	The Rational
Migration on demand curve (MDC)	3.7801	2.4069	3.1045	2.2424
Elimination/ postponing of major purchases (EPMP)	4.3617	3.1862	3.5373	2.8485
Aggressive search for options (ASO)	4.0567	3.4000	3.6269	2.8182
In the process of choosing products the price comes first (PC)	4.2199	3.1724	3.6418	2.7576
In the process of choosing trademarks/product quality comes first (QC)	3.3723	3.9793	3.9701	4.2121
A tryout of new innovative products (TNP)	2.1418	2.3793	2.4478	2.9394

was made for the purpose of surviving; only 14.54% of them stated that, in the last six months, compared to the previous period, they consumed less and saved more money, therefore, the decrease of consumption was for the purpose of saving money. The fact that most of the respondents, although they consumed less, they did not manage to save money almost at all, is due to a higher inflation and prices during the period analyzed as well as to a freezing or decrease of incomes as a consequence of the measures taken by the Romanian employers. In the last 6 months, the majority of ‘panicked’ consumers changed the favorite products/trademarks with some cheaper ones (67.02%) and eliminated/postponed most of their important purchases (90.78%). At the same time, they allotted more time to gathering information during purchasing and buying products process (80.50%), searching aggressively for comparative options and thus, for the best choice, most of them consider first of all the price (87.23%) but also, the quality (54.96%). It is obvious that within this segment, there is a decrease of consumption from both a quantity and quality point of view. At the same time, an important part of the ‘panicked’ consumers approached a more rational behavior not only by eliminating the products that are not strictly necessary but considering a deeper analysis of the quality-price balance. In other words, although they are willing to pay less, they want the highest usefulness for the price. Only a minority of the ‘panicked’ (8.16%) was willing to try new innovative products in the last six months.

ii. The ‘concerned’: as to the behavior of this cluster regarding consumption vs. savings, there are two directions: on the one hand 50.34% of its members acknowledged that, in the last six months compared to the previous period, they had a lower consumption for most of them with the purpose of saving money (28.77%); on the other hand, 44.66% of the concerned consumers preserved the level of consumption by decreasing their savings, the remaining part of them having the same level of consumption and savings. Only a minority (11.03%) of the members of this cluster

migrated to the lower level of the demand curve; a great number of them kept on buying their preferred products/trademarks or they changed them only in some circumstances (categories of products). Only 43.45% of the concerned consumers eliminated/postponed the purchase of important items in the last six months compared to the previous period, the rest of them kept on buying the same. Unlike the ‘panicked’, only 48.9% of the ‘concerned’ allotted more time for information and comparison of offers when making choices. Within this process, quality comes first (79.31%) and then comes the price (40.69%). One can notice that the decrease of consumption was made through means of eliminating the strictly necessary products, preserving though the quality of the products and services consumed. The ‘concerned’ consumers are not willing to try new innovative products during this period considering that only 13.10% tried such products in the last six months.

iii. The ‘cautious’: this cluster also displays two major directions relatively balanced regarding consumption vs. savings. On the one hand, 47.70% of the cautious acknowledged that they reduced consumption for the purpose of surviving, in most of the cases, considering that only 11.9% of them succeeded to save more in the last six months. 52.30% of the members of this cluster preserved their consumption, 22.4% of them decreasing their savings in order to achieve that. Only a minority of the members of this cluster migrated to the lower curve of demand (32.4%) in the last six months, the remaining kept on purchasing the favorite products and trademarks or they changed them with cheaper ones only in some circumstances. The majority of the ‘cautious’ eliminated/postponed major purchases (50.75%) and gathered more information for purchasing process (55.22%) searching for the best choice options. For the ‘cautious’, the quality comes first (71.64%) and then the price (59.70%) when making choices for products. If we compare the ‘cautious’ with the ‘concerned’, a more rational behavior is more intense at the level of this cluster. The ‘cautious’ reduced their consumption by eliminating the unnecessary purchases and by reducing the quantity of the products

Table 5. Descriptive statistics – mean value of the expenses at the level of clusters based on COICOP classification.

Categories of products and services	Mean value of the expenses at the level of clusters			
	The Panicked	The Concerned	The Cautious	The Rational
Basic food products (meat, dairy products, bread and pastry products, fruits, vegetables, etc.)	3.8546	4.1724	4.1045	4.3939
Other food products (sweets, soft drinks, coffee, etc.)	2.8759	3.5793	3.5522	3.6364
Alcoholic drinks and tobacco	2.0248	3.0621	2.9851	3.0606
Personal care products	3.3688	4.1310	3.7313	4.3636
House maintenance and improvement	2.6348	3.4966	3.1493	3.8788
Transport (gas, tickets, seasonal tickets)	3.3582	4.0069	3.4030	4.1515
Water, gas, electricity	3.9433	4.2828	3.9552	4.2121
Magazines, newspapers, books	2.2447	3.1655	2.4925	3.3939
Garments and shoes	2.7128	3.6000	3.3284	3.8788
Appliances and tools (household appliances, electronics, furniture, etc.)	1.8369	2.9517	2.8060	3.0606
Journeys, holidays, leisure	1.7482	2.8897	2.6119	3.2727
Pharmaceutical and medical care products	3.8723	4.2000	3.8507	4.1515

and services consumed. Only 10.45% of the concerned tried new innovative products in the last six months.

iv. The 'rational': the main tendency at the level of this cluster is preserving the consumption, considering that 63.70% of them preserved their level of consumption in the last six months compared to the previous period; 27.3% of them decreasing their savings. The majority of the 'rational' kept on purchasing favorite products and trademarks migrating to the lower curve of demand only in some situations. At the same time, the majority of the members of this cluster made big purchases during the period analyzed (69.70%). Generally, the 'rational' did not allot more time for information when making choices as they relied more on quality (84.85%) than on price (39.39%). One can notice that within this segment, there are no important changes in consumers' behavior. There is, still, a slight difference or rationalization through a decrease of unnecessary purchases. The 'rational' represent the category of consumers who are willing to try new innovative products considering 24.4% of them expressed their willingness for trying new products in the period analyzed.

The evolution of expenses on categories of products and services at the level of clusters in the last six months compared to the previous period

The analysis of the evolution of the expenses in the last six months compared to the previous period at the level of the clusters was made for the main categories of products and services according to COICOP classification (Table 5).

At the level of all clusters, we can notice the tendency of rationalization of expenses in the last six months compared to the previous period, by keeping the expenses at

the same level for strictly necessary products (basic food products) and decrease of expenses for unnecessary products (appliances, journeys, holidays, leisure). The cut in expenses as well as rationalizing process vary in intensity from one cluster to another.

The 'panicked' spent less in the last six months for all categories of products in accordance with the main tendency of decreasing the consumption. The 'panicked' spent the most on water, gas, electricity, basic food products, pharmaceutical and medical care products. On the contrary, they spent the least on journeys, holidays, leisure, appliances, alcoholic drinks and tobacco. This confirms the central tendency of eliminating/postponing major purchases at the level of this cluster.

The 'concerned' spent almost the same amounts on water, gas, electricity, pharmaceutical and medical care products, basic food products, transport and personal care products. The 'concerned' spent the least on journeys, holidays, leisure, and appliances. The evolution of the expenses during the period analyzed uphold the change of the behavior on all directions measured. An interesting aspect is the fact that the 'concerned' spent more on pharmaceutical and medical care products compared to other clusters.

The 'cautious' compared to the 'concerned', reduced their expenses more for all categories of products. The evolution of the expenses on categories of products and services confirm the change of behavior at the level of this cluster on all directions evaluated.

The 'rational' consumers compared to other clusters spent, during the period analyzed, the same or a little more for some categories of products, basic food products, personal care products, transport, pharmaceutical and medical care products. Within the frame of this cluster, there is a slight tendency to reduce expenses for some categories of products and services which are

Table 6. Descriptive statistics – mean value of the confidence at the level of clusters.

Directions of evaluating the degree of confidence	Mean value at the level of cluster			
	The Panicked	The Concerned	The Cautious	The Rational
The degree of confidence in brands/ products	3.1099	3.6345	3.5970	4.0000
The degree of confidence in companies/ business environment	2.4716	2.9724	3.1493	3.7273
The degree of confidence in the government and anti-crisis measures	1.5851	2.1724	2.4627	2.8485
The degree of confidence in the manner in which media reflected the evolution of the depression	3.0638	3.3241	3.4328	3.6364

Table 7. Pearson’s correlation coefficients between independent and dependent variables.

Variable	RP	RA	MDC	EPMP	ASO	PC	QC	TNP
RP	1.0000							
RA	0.248**	1.0000						
MDC	0.612**	163**	1.0000					
EPMP	0.519**	0.197**	0.590**	1.0000				
ASO	0.406**	177**	0.402**	0.443**	1.0000			
PC	0.524**	0.151**	0.550**	0.475**	0.459**	1.0000		
QC	-0.292**	-0.173**	-0.355**	-0.267**	-0.233**	-0.373**	1.0000	
TNP	-0.197**	0.002	-0.112**	-0.224**	-0.195**	-0.222**	0.232**	1.0000

**The correlation is significant at the level 0.01. RP – risk perception; ASO – aggressive search for options; RA – risk aversion; PC – prices comes first; MDC – migration on the demand curve; QC – quality comes first; EPMP – elimination/postponing of major purchases; TNP – tryout of new innovative products.

not strictly necessary – appliances, journeys, holidays, leisure.

Measuring the degree of confidence

The measurement of the degree of confidence, at the beginning of April, was made according to the following directions: trademarks/products, companies/business environment, the government and anti-crisis measures taken by the government and the manner in which the press reflected the evolution of the economic crisis. Using cross-tabulation, we determined the degree of confidence in the directions evaluated at the level of clusters (Table 6).

As expected, the ‘panicked’ are the most pessimistic consumers, their confidence in companies/business environment, government and anti-crisis measures has the lowest values. On the contrary, the ‘rational’ are the less pessimistic; nevertheless, their confidence in the government and anti-crisis measures has decreased very much.

For both the ‘panicked’ and the ‘cautious’, there is the same hierarchy regarding the degree of confidence: 1) trademarks/products, 2) media, 3) companies/business environment, and 4) government and anti-crisis measures. As to the ‘concerned’, the hierarchy has slightly changed, as they profess the highest degree of

confidence in the manner in which the press reflected the evolution of the depression, the confidence in the companies/ business environment coming after it. The ‘rational’ consumers seem to have less confidence in the manner in which Romanian press reflected the evolution of the economic crisis, their higher confidence being in trademarks/products.

The analysis of correlations and hypotheses testing

In order to determine if between the independent variables - the perception of the crisis effects generated by the evolution of the national economy, the aversion to the evolution of the national economy – and the dependent variables (the change of behavior) measured there are significant associations (a direct relation of causality), we decided to use the Pearson’s correlation analysis. The results of the analysis made for the entire data base are presented in Table 7.

Almost all correlations presented in Table 7 (exception is the one between the trial of new innovative products and the approach of the national economy evolution) are statistically significant at the level of 1%. The negative statistic correlations may be noticed between the independent variables and quality as well as between them and the trial of new products. At the same time, the

negative statistic correlations may be noticed between quality, the trial of new innovative products and all other dependent variables, except the relation between quality and the trial of new innovative products which is positive. According to the correlation coefficient, some may note as well, a significant statistic association between behavior variables measured which emphasizes the consistence of the scale used for determining the directions of change at the level of consumers' behavior.

H₁ forecast that perception of the outcomes of the recession (risks) and the change of consumers' behavior there is an association statistically significant. According to the results and the correlation analysis, there was identified a statistically significant association between risk perception and all dependent variables used for measuring the change of behavior. Thus, these results sustain H₁.

H₂ forecast that between the aversion to the evolution of national economy (risk-generating) and the change of consumers' behavior there is a statistically significant association. The correlation coefficients obtained uphold the fact that between an independent variable and almost all dependent variable measured is such a relation except the relation between the aversion to the evolution of the national economy and the trial of new innovative products. This conducts to a partial confirmation of H₂.

CONCLUSIONS AND IMPLICATIONS

The nowadays economic crisis is an unprecedented situation for the entire world if we consider its global dimension and the severeness of its outcomes. The negative economic evolutions of all national markets conducted to important changes in people's way of thinking, or behaving as well as in their system of values (things they value). The question that generated this research study was to what extent the psychological factors play an important role within this change. No previous study analyzed the relation existing between the psychological factors and the change of consumers' behavior in recession periods. The empirical results uphold the starting premise that there is a statistically significant association between risk perception, aversion to risk-generating situations and directions of behavior change measured as: migration to the low demand curve, the postponing/elimination of the major purchases, the aggressive search of options in choosing products, in the process of product choice the price comes first, in the process of product choice the quality comes first, the trial of new innovative products.

An interesting aspect relevant for the study is that, from the two psychological factors considered within the conceptual model, risk perception influences the change of behavior to a greater extent, a fact upheld by the coefficients of calculated correlation as well as by the profile of behavior change at the level of clusters. Thus,

the most significant changes were identified at the level of clusters for which the perception of the outcomes of the economic crisis acquired the highest values. Another interesting aspect pointed out by the results of the research study is that from the two psychological factors considered, the attitude to the risk-generating situations has a greater influence than the perception of the confidence degree risks. Thus, it has been proved that the degree of confidence in all measured directions had the lowest values at the level of clusters for which the risk aversion had the highest values.

About the particularities of Romanian consumers' behavior change in crisis conditions, our research emphasized the existence of a dual tendency regarding the consumption vs. saving. Even if most of the Romanian consumers were hit by the economic crisis being affected by the economic shocks, and the general sentiment in April, 2010 which was that the worst that was not over, they tended to sustain spending through diminishing their saving. On one hand, part of the Romanian consumers diminished saving in order to survive. This is the case of the 'caution' and of the 'concerned' consumers sustained their spending most of them diminishing their saving. According to the empirical findings of the researches presented in specialized literature, there is a general tendency in different crisis episodes towards saving, consumers considering saving as a response to the uncertainty. In the first quarter of 2010, according to The Nielsen Global Consumer Confidence and Spending Report, at the global level, the consumers were still cautions regarding their spending. But the concern varied to one country to another. For instance, the UK consumers were more optimist then other European consumers taking in to account that in Q1 2010 they started to make frequent shopping and they didn't feel constrained to shop at discount retailers. On the other hand, Italian consumers had as top priority increasing savings because of the uncertainty generated by the unemployment increase in the same period. Also, Greek consumers were under pressure of diminishing the spending because of the economic instability.

In spite of the lack of recovery signs in April, 2010, and of the pessimistic forecasting for the Romanian economy evolution during 2010, an important part of the Romanian consumers reduced saving in order to sustain spending. This particularity, can be explained by some remaining mentalities from the communist period, mentalities that are still integrated in the Romanian culture. After 1990, when the Romanian market became open, the Romanian consumers faced with a large offer. They started to buy in some cases more than they needed, after over 45 years when their possibilities were limited because of the penury of products and of the rationalization of basic goods. They started to consume more than they produced and to consume in advance, having a high degree of indebtedness. We can note that, then but also now,

part of their spending represent waste. Anyway we have to also note that our research pointed out a rationalization of consumption and spending allocation in present condition. This is a feature of consumers' behavior change in all national markets. But, we can state that the present economic crisis is a lesson for many Romanian consumers regarding the elimination of waste in the last 20 years.

The results of the study provide a new perspective for approaching consumers' behavior in crisis conditions providing an empirical support for this perspective, opening new directions for research. On the other hand, if in conditions of economic growth the companies focus their marketing efforts to identify consumers' needs and desires for building, communicating and delivering upper value to their clients (Kholi and Jaworski, 1990), at present, this approach could be an unjustified marketing effort. What the companies should understand is how their clients react, in particular and the consumers' in general, and how their behavior changed. Such an understanding should represent the starting point in planning the response of the organization in such conditions. Thus, marketers should "penetrate" their clients' minds. For this reason the study offers them a clearer image about the manner in which consumers react and behave in economic crisis conditions.

LIMITS OF THE RESEARCH AND FUTURE RESEARCH DIRECTIONS

The most important limit of this study comes from the "perishability" of the topic itself, that is, from the fact that there is a certain dynamics of the four segments as to their dimension as well as to the intensity of the behavior change according to the moments within the depression. That is why, if the measurement had been made during June (after the government of Romania imposed austerity measures), the results would have probably shown more intense changes at the level of Romanian consumers' behavior.

As a further research direction, we intend to extend the empirical measurement in other national markets in order to test the generalization degree of the developed model. But also, the model can be adopted by other researchers with the same purpose.

The present research study focused on finding steady empirical answers to the following research question: "to what extent the psychological factors influence the change of consumers' behavior in the context of present economic crisis?" But at present, many questions have become very important: how durable are these changes? How will the consumer be after the economic crisis?

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