THE ABILITY TO ASSUME THE DECISIONAL RISK IN THE CONSUMPTION PROCESS

Assistant PhD. Student Laura DIACONU
Faculty of Economics and Business Administration
"Al. I. Cuza" University Iaşi, Romania
dlaura_es@yahoo.com
Professor PhD. Corneliu C. DIACONU
„Gr. T. Popa" University Iaşi, România
cdiaconu_09@yahoo.com

Abstract

The individuals' ability to assume the risk in taking the consumption decisions was largely debated both at the theoretical and empirical level. While at the half of the XX th century there were many attempts to find out a mathematical solution for this problem, with the help of the statistical and econometrical interpretations, at the beginning of the XXI st century the analysts' preoccupation for this subject imposed taking into consideration some elements related not only to the goods acquired but also to the specific feature of the individuals. This is why the present paper wants to analyze the individuals' ability to assume the risk in taking the consumption decisions, considering some objective and subjective aspects, such as the temperament and the character traits, the socio-cultural particularities, the possibility to access the information or the products' intangible characteristics - such as, for example, the brand name. Assuming that the isoutility function does not reflect only the consumers' preferences for various goods, but it is also an assessment for the probability of occurrence of some states/events, in the end of this paper we tried to determine the way in which the ability of assuming the risk may be associated with the shape of the indifference curve.

Key words: uncertainty, risk, decisional process, consumption

JEL Classification: D81, D11

1. INTRODUCTION

Most of the analysts define the risk perceived by the individuals in taking the consumption decisions with the help of other two concepts: the uncertainty degree and the implicit consequences, resulting from the buyers' choices. While the uncertainty is associated to the process of correlating the individuals' expectancies with the buying decision (1), the consequences of this decision refer not only to the functional performances of the acquired goods but also to the time, effort and money invested in order to reach the established goals. The uncertainty may also be regarded as an "expression of the incomplete, approximate nature of the information related to the concerted influence factors and to the consequences of their action, in time and space" (2). Analyzed from this point of view, the nature of the uncertainty is more a cognitive one, resulting either from the lack of the knowledge, or from the individuals' limited intellectual abilities. Yet, from the organizational theory point of view, the uncertainty is not an individuals' cognitive feature any longer, but a characteristic of the environment where people do their activities (3).

Due to the complexity of the subject, the present paper wants to analyze the individuals' ability to assume the risk in taking the consumption decisions, considering some objective and subjective aspects, such as the temperament and the character traits, the socio-cultural particularities, the possibility to access the information or the products' intangible characteristics - such as, for example, the brand name. Assuming that the isoutility function does not reflect only the consumers' preferences for various goods, but it is also an assessment for the probability of occurrence of some states/events, in the end of this paper we will try to determine the way in which the ability of assuming the risk may be associated with the shape of the indifference curve.

2. THE RISK AND THE UNCERTAINTY IN THE DECISIONAL PROCESS. MAIN DETERMINANTS

The idea according to which the analysis of the risk and uncertainty may generate relevant information for the economic theory was firstly suggested by Frank H. Knight, in 1921, which made a clear delimitation between the two concepts in the paper "Risk, Uncertainty and Profit". According to the Knight's interpretation, the risk is limited to those situations in which the individual may attach mathematic probabilities to the accidental events that may occur. Unlike risk, the uncertainty refers to those cases in which the events can not be expressed in terms of specific mathematical probabilities. Consequently, from the Knight's perspective, the distinction between risk and uncertainty is related to the assumption that individuals act in view of the existence of some well-defined probabilities of the possible outcomes.

The analysis made by Knight was the starting point of some later approaches, among which we do notice the paper of John von Neumann and Oskar Morgenstern „The Theory of Games and Economic Behavior"(1944). They proposed an objective approach to the decisional process under risk, formulating the hypotheses of the anticipated utility based on the statistical probabilities. The purpose of these hypotheses was to study the individuals' attitude towards risk. The conclusion of the two analysts was that the maximization of the expected utility is the optimal attitude people should take in situations of uncertainty. Therefore, consumers, facing the problem of taking a decision, will opt for the situation that allows them to maximize the utility.

The analysis made by Von Neumann and Morgenstern had various subsequent interpretations. Nicholson (2002), considering the risk a results' variation of some decisions taken under uncertainty, demonstrates why the individuals, when they have to choose between two situations with the same expected value, will usually opt for the one that has the smallest variation probability of the final result. In other words, when an individual may choose between two goods of the same type, one having the price "n" USD and the other one "2n" USD, it is more likely that the consumer opts for the first product because the risk generated by a possible loose would be greater in the second case.

A similar approach is also met at Milton Friedman, Leonard J. Savage or Harry Markowitz, who also analyzes the concept of risk aversion and the relative properties of the anticipated utility (4). So, in order to classify the decisions taken under risk, Markowitz proposed an operational rule based on the anticipated value and the standard deviation. While the anticipated value is considered by Markowitz an indicator of the investment's profitability, the standard deviation is used to determine the degree of risk. The Markowitz rule starts from the hypothesis that the individuals are adversaries of the risk, preferring the decision with highest anticipated value and lowest risk degree. According to this rule, in the case of the alternative decisions A and B, with the anticipated values $E(x_A)$ and, respectively, $E(x_B)$, with standard deviations $\sigma(x_A)$ and, respectively, $\sigma(x_B)$, if:

$$E(x_A) = E(x_B) \quad (1) \quad \text{and}$$

$$\sigma(x_A) < \sigma(x_B) \quad (2),$$

then an individual with risk adversity will prefer the A decision detrimental to the B decision. The individual's preference for the A decision detrimental to the B decision will also occur when:

$$E(x_A) > E(x_B) \quad (3) \quad \text{and}$$

$$\sigma(x_A) = \sigma(x_B) \quad (4).$$

The interpretation of this last situation is that, between two decisions with the same risk degree, individuals will choose the alternative with the greatest anticipated value.

The importance of the Markowitz rule is limited because, in the case of two decisions with different anticipated values and standard deviations, respectively:

$$E(x_A) > E(x_B) \quad (5) \quad \text{and}$$

$$\sigma(x_A) > \sigma(x_B), \quad (6),$$

this rule does not provide any indication regarding the preferences of the individual with risk aversion.

To overcome the limits of the Markowitz rule, some analysts have suggested the usage of the variation coefficient instead of the standard deviation, as an indicator of the risk degree. The variation coefficient measures the normalized standard deviation through the anticipated value and so the Markowitz rule "anticipated value – standard deviation" can be replaced with the rule "anticipated value – variation coefficient" (5).

Few years later, in 1964, the problem of measuring the individuals' risk aversion was largely developed by Pratt. He determined the individuals' risk aversion with the help of a coefficient calculated as a ratio between the utilities of two goods among which the consumers have to opt for. One of the most significant interpretations of this coefficient shows that the measure of the individuals' risk aversion is directly related to the money amount that they are willing to pay in order to be sure of their decision's result.

The analysts consider that the individuals' risk aversion is determined by several factors including the consequences of some previous risky decisions, the confidence degree, the expectations and the aspirations (6). The ability to take the risk in the consumption decision was also correlated with the personality traits. Chauvin, Hermand and Mullet (2007) noticed that the persons that are extroverted, as well as those with a high level of emotional stability, are more tempted to adopt risky decisions than the others. A possible explanation of this opinion is offered by Torgensen and Vollrath (2002) which argue that, by definition, the extroverted individuals need a shorter period of time to reflect on their decisions than to act. It was also found that the persons with a high level of education and training, with high incomes, more conservative but very confident in authorities, foresee a much lower risk than other people, in any decision they take.

Menon, Raghubir and Agrawal (2008) identify some specific features, which particularize the individuals in terms of the ability to assume the risk. Thus, they consider that the people's temper and the predisposition to depression may strongly influence their decisions. More depressive persons seem to be more realistic in estimations than the average of the population, in this case Keller, Lipkus, and Rimer (2002) talking about a "depressive realism" (7). Chang (1996), analyzing the consumption behavior of the Americans and of the Chinese, puts on the temperament the differences in the ability of assuming the risk. According to his study, the Chinese are more pessimistic than the Americans, which is why they are less willing to take risky decisions. Other researches, which explain the differences between the decisions and the actions of the individuals from the two nations with the help of the cultural influences - habits, beliefs and traditions -, suggest that, on contrary, the Americans show a greater risk aversion than the Chinese (8). Arguing this idea, Weber and Hsee (1998) are focusing their research on the cultural dimensions identified by Hofstede (1980), paying a great attention to the issues related to individualism and collectivism. They argue that in those cultures where the collectivism prevails, such as China, a person who made a bad choice in a risky decision could overcome easier the negative consequences because he enjoys the support and the help of the family members and of the group. On contrary, in the individualist cultures, such as the United States, a person who takes a risky decision will have to face alone the consequences, possibly unfavorable, of his choice. Therefore, the collectivism plays an important role in surpassing the potential losses resulting from a decision, by the social diversification of the risk. Thus, it can be noticed that the cultural foundation of the individuals is a more powerful determinant of the risk perception than the income and even than the individuals' profession.

A number of studies suggest that the individuals are approaching the risk in different ways, depending on how they make the purchases (9) - (10). Due to the fact that the Internet does not give consumers the opportunity to try or see the product before buying it, the risk will be greater in this case than in the purchases made from the classical stores. However, even in this last situation, the insufficient information about the price and the quality of the products from different markets generates a high level of the risk. The limited and imperfect information may have several causes. Firstly, the information could differ from the point of view of the credibility. Since not all the pieces of information are correct and accurate, consumers have to consider their sources. Moreover, the information is perishable and, therefore, it must be constantly updated. Secondly, it has to be considered the intellectual abilities of the individuals, since not all have the intelligence or the

education necessary to process correctly the available information. Collecting the information generates a cost. Therefore, any rational individual would not be willing to pay for picking up the information beyond the point where the marginal benefit equals the marginal cost of collecting the information.

Considering all the factors that influence the risk aversion, the specialized literature identifies more types of risk: the financial one, the risk of performance, the psychological and the social risk (11). The financial risk consists in the fact that consumers may lose a sum of money by choosing a product or a particular brand. Moreover, if the product is doubtful for the safety or the health of the individuals, then we talk about a physical risk. If, however, the good proves to be inadequate for the individuals' personality, then the risk is a psychological one. The social risk can be correlated to the cultural dimensions mentioned above - individualism versus collectivism –, because it concerns the attitude that people have towards the decisions made by a person. The risk of performance is correlated to the possibility that a good does not function as it would have been expected. This type of risk also reflects the individuals' uncertainty regarding the products' quality. It is difficult to distinguish between a good quality product and one with a lower quality because the consumers' decisions are often taken considering only the observable characteristics or attributes that are easily determinable. The risk consists in the fact that these apparent features can mislead people, the real value and performances of a good being noticeable only after the purchase decision was taken.

Some analysts, such as Erdem and Swait (1998), consider that the product's risk of performance can be removed by focusing the purchases on the branded goods, because a firm's reputation can be, sometimes, a guarantee of the quality. The explanation of this statement is that a company that wants to fidelizeze its consumers has a strong incentive to offer goods of high quality. Moreover, the reputation of the brand does not only certify the quality of the products, but it also gives consumers the possibility to return the goods if they do not meet their expectations. The idea is emphasized by Dean (1999) who believes that individuals, in order to reduce the perceived risk in taking the consumption decisions, use the brand name of the goods as a choice criterion. A previous study conducted by Grewal and Krishnan (1998) comes to reinforce this conclusion, as they demonstrated that individuals perceive a lower risk when purchasing products with strong brand names than when buying private label goods or without a known brand. Starting from this idea, other analysts consider that individuals make their consumption decisions based on the brand name and on other extrinsic features of the products when they do not have enough information about those goods. Thus, Brucks et al. (2000) have conducted a study on several products, both with strong brand names and with private labels, in order to determine the way in which their price and quality are perceived and the individuals' intention to buy them. The conclusion of the study shows that the brand name has a positive effect on the consumers' decisions, reducing the cost of searching and the cognitive effort, because the firm's reputation reduces the risk related to the products' quality. Therefore, in the absence of the relevant information, a consumer who is not familiar with a particular product will use the trademark as an indicator for the quality of that good.

At the opposite pole to the idea underlined in the studies mentioned above, which argues that the brand name may reduce the uncertainty and the risk in taking the consumption decisions, it is situated the opinion of Lynch, Miller, Porter and Plotters (1986). They argue that although some companies enjoy reputation and strong brand names, the quality of their goods is often similar to the products that do not have a known brand name. Moreover, even in the case of the purchases made through the Internet, Donthu (1999) notes that the brand name of the goods is not a guarantee of the products' quality but, on the contrary, it increases the risk perceived by the individuals. He justifies this finding by making reference to the nature of the sample included in his study. This was composed of people aged between 19 and 25 years old, with a medium to low income, who perceived the possible financial loss resulting from the purchase of a cheaper product smaller than in the case of buying a branded good, more expensive.

The level of the risk perceived by individuals may also be correlated to the possibility of determining the properties of the purchased goods and services. Taking into account this aspect,

Asch and Wolfe (2001) classify the products into three categories: those with easily noticeable properties, which can be identified prior to the purchase, those with characteristics resulting from the experience, by using those goods and services, and services with features difficult to determine - for example the medical, financial and other consultancy services. This last category is usually focused on that services whose characteristics are impossible to be identified and evaluated by individuals, even after they were purchased and consumed. There is a positive correlation between the ability to easily determine the products' characteristics and the size of the risk perceived by individuals: the more obvious the characteristics of the goods and services are, the less risky the purchase decision will be. Therefore, we notice that the acquisition of the third category mentioned above will involve a high level of risk, because in this case the consumers do not have enough information in order to determine whether the services provided were the appropriate ones. According to the observations made by Asch and Wolfe (2001), it is possible that the individuals are more reluctant regarding the purchase of services, in general, rather than of the goods because the services are those who have multiple noticeable characteristics after their consumption or, sometimes, even impossible to assess. The more risky, complex and expensive are the consumption decisions, the longer will be the process of deliberation, in which the consumer will search and analyze multiple sources of information.

The ability of the individuals to assume the risk was associated by Deaton and Muellbauer (2007) with the shape of the indifference curve. The two analysts assume that the isoutility function does not reflect only the consumers' preferences for various goods, but it is also an assessment of the probability of the occurrence of some states/events (states are used by Deaton and Muellbauer to characterize all the outcomes possible to be achieved through the individuals' actions).

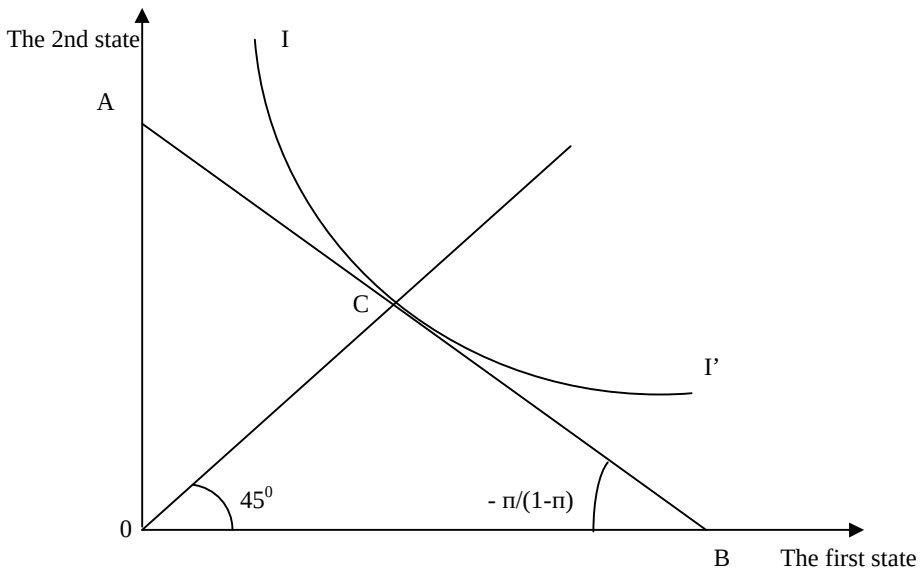

Figure no. 1 The indifference curve and the risk aversion
Source: adapted from Deaton, A., Muellbauer, J., *Economics and Consumer Behavior*, Cambridge University Press, 2007, p. 386

In figure no. 1, the chosen good has the same value both in the first state and in the second one. Considering this aspect, the path of the indifference curve will be calculated in the point where it is crossed by the 45^0 line, also called by Deaton and Muellbauer "the certainty line". Therefore, the path of the AB line reflects the measure in which the consumer, starting from a certainty position, is prepared to give up the good in the first state and to buy it in the second state. Supposing that the value of the good is the same in both of the states, any degree of the path, smaller or bigger than the unit, suggests that the person considers that one of the two states has a

higher probability of appearance. If we note the appearance probability of the first state with π, then the path of the AB line will equal – π/(1-π). We notice that the path of the line is smaller than 1, so the first state has the greatest probability of appearance.

As it is shown in the figure no. 1, the shape of the indifference curve is a normal one: convex. Deaton and Muellbauer (2007) consider that this convex shape of the curve is particular to those person that have a high risk aversion and, consequently, they will be willing to pay a greater sum in order to avoid the risk. On contrary, in the case of the individuals that like the risk, the indifference curve will be concave. When this curve is a straight line, we talk about the persons for which the level of the risk is less important in taking the consumption decisions.

CONCLUSIONS

Considering all the aspects mentioned above, we can conclude that assuming the risk in the consumption decisions is influenced both by the extrinsic and intrinsic characteristics of the products, as well as by other subjective and objective factors that have a strong impact on the individuals' behavior. Therefore, we can notice that the risky decisions seem to be taken easier by both the extroverted persons and by those who have a high level of emotional stability. Moreover, the individuals that come from the collectivist cultures – such as China or Japan – will be more tempted to take the decisions under a higher level of risk than those from the individualistic societies, these last ones having a convex indifference curve. Of course, the consumers who can easily access the information, who can permanently complete and keep them up to the date, will not manifest a high risk aversion because there are small chances that they confront with an unforeseen and risky situation. The same attitude can be met in the case of the individuals with a high level of education and training, with high incomes, more conservatives but very confident in authorities.

NOTES

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