

INFLUENCE OF THE RISK INCLINATION ON THE SUBJECTIVE PERCEPTION OF ECONOMIC RISK

Petya Angelova¹, Tanya Taneva²

¹Secondary school 11, Stara Zagora, Bulgaria

²Trakia university, Stara Zagora, Bulgaria

ABSTRACT

Viewed as a stable personal predisposition towards engaging in risk behaviours in situations with evident indefiniteness of the choices, the risk inclination is one of the subjective predictors in the choice of risky alternatives of an activity. This article presents the psychological theories, that conceptualize risk inclination, related personality variables and the main methodological instrument for its empirical assessment. It is a formulated theoretical hypothesis for non-coincidence between the situational preference towards risk and the personal inclination towards risk. The influence of sex on risk behavior is also discussed. An attempt was made to distinguish between risk inclination and sensation seeking tendency.

Key words: *risk avoiders, risk reducers, risk optimisers, sensation seeking, motivated and unmotivated risk*

The thesis of the existence of a peculiar personality tendency to engage in (respectively to avoid) risk behaviour has been discussed in psychological literature. In contrast to the widely spread thesis of economical analyses that people were unwilling to take risks, in certain situations that make a preference between a smaller and a greater risk, depending on the expected value of this perspective (Gupta a. Murray, 2005).

The aim of this paper is to presents the psychological theories, that conceptualize risk inclination, related personality variables and the main methodological instrument for its empirical assessment.

Avoiding risk and *taking risk* are two key concepts in Kahneman's work. It is a well-known fact that people risk large sums of money every week when they buy lottery tickets, knowing with a high degree of certainty that they have wasted it, with the chances of winning the highest lottery prize being 1:14 million (Kahneman, per McManus, 2004). The examined people claimed that if the large prize sums were distributed among more people (and not won by only one person as a jackpot), more people would be willing invest (and thus lose) more money to play the lottery. Therefore, if the chances of winning seem higher (1:7 million instead of 1:14 million), people would be more willing to take a risk. This irrational behaviour could be viewed within the term "seeking risk", even though the real probability of winning remains very low (Kahneman, per McManus, 2004).

Viewed as a stable personal predisposition towards engaging in (respectively avoiding) risk behaviours in situations with evident indefiniteness of the choices, the tendency towards risk is one of the predictors in the choice of risky alternatives of an activity (Kondratskiy, 1982). As a super-situational feature of personality, it determines the individually different attitude towards risky tasks and risky choices.

The super-situational risk was examined by Ahlgin (1989) as risk related to super-situational activity. It represented the subject's readiness to go beyond the situation's requirements, to set side goals from the perspective of the initial task (creativity, intellectual or cognitive activity, etc.), to overcome the external and internal limits (barriers) to the activity, and was observed in situations with an element of danger. For example, in a study by Sanders a. McCormick (1993), the predisposition towards financial risk was related to the tolerance towards risk (readiness to take risks) in investment, lending or leasing a credit.

According to a number of authors (Kahneman, Tversky, Llewellyn, Lovello, etc.) people have different personal inclinations towards risk and three risk types could be differentiated among them,

first formulated by Kahneman (1979), depending on their factual orientation towards risk (per Llewellyn, 2003):

- Risk avoiders – generally avoid activities involving risk;

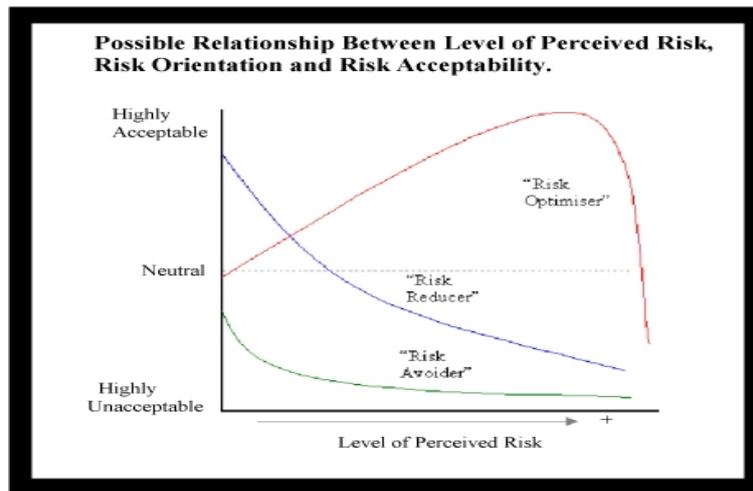
- Risk reducers – participate in high-risk activities but not for the sake of the risk itself. It can be assumed that that Llewellyn (2003) means that the representatives of this risk type take risks out of necessity, as an inevitable element of the specific activity, which is subjectively significant regardless of whether it involves risk or not. In this sense, the risk reducers are forced to take risks, yet make efforts to reduce them as much as possible;

- Risk optimisers – participate in high-risk activities, partially because they involve risk (and due to the challenge related to the risk). Kahneman and Llewellyn did not clarify in detail this risk personality type, yet the concept of “risk optimisers” bears the meaning of people who are motivated to expose themselves to risk and even seek it actively to an extent, because they assess the risk activity optimistically, as a source of potential positive opportunities, from which they could benefit.

Figure 1 shows how the orientation towards risk and the level of perceived risk interact to determine the overall acceptance of risk. The tendency towards an increasing acceptance of risk is observed only in the risk optimisers, more specifically in the subjectively-perceived level of risk of no more than 75% compared to the highest level of uncertainty of the behaviour’s outcomes. In case of a subjective risk assessment above this values, its border of subjective acceptance drops sharply, even for the risk optimisers. Compared to this group, the risk avoiders and risk reducers exhibit a consistent tendency towards a reduction in the risk acceptance border with the increase in its subjectively perceived level (Llewellyn, 2003). These results were the grounds for the formulation of the formulated by Kahneman (1994) theoretical hypothesis, which could be designated as a “non-coincidence hypothesis” between the situational preference towards risk and the personal inclination towards risk. This hypothesis is tied to the statement that the actors’ subjective preferences can more or less be oriented towards risk, depending on the specific situation, in which they are found, whereas the personal inclination “orientation towards risk” in them is relatively consistent over time.

Llewellyn (2003) has a reason to claim that this theoretical hypothesis and the chart visualising it do not give an answer to the question of why the same people would take the risk in certain activities, but avoid it in others, as well as what the influence of the social environment is on the expression of subjective orientation towards risk. In this sense, to describe, to describe the real phenomenon of “risk behaviour”, these three parameters (subjective acceptance, level of risk perception, and personal orientation towards risk) are insufficient. Initially, Llewellyn used in empirical research the questionnaire for measuring the attitudes towards risk by Franken, Gibson, Rowland (1992), containing 20 scaled items (short version contains only 10 items), constructed in 2 scales – psychological and physical subscales for risk-taking with high factor and convergent validity.

Figure 1 Ratio between the extent of perceived risk, orientation towards risk acceptance (per Llewellyn, 2003).



Consequentially, Llewellyn developed a new instrument for the assessment of physical and health risk. In the profiles he prepared for the people engaging in risk behaviour, despite the varying nature of risk, the inclination towards risk and the active seeking of experiences and sensations, as well as personal differences were found everywhere as stable determinants, which influenced risk-taking significantly. The more unstable determinants were neurotics, sex and the confidence in one's own abilities (competence). Llewellyn examined the psychological profiles related to different behaviour predisposing towards physical risk. As a whole, he accepted Kahneman's three fundamental risk types: risk avoiders, risk reducers, and risk optimisers.

Due to the fact that up to Llewellyn (2003) no respective measure or criterion regarding to the subjective assessment of risk could be identified in the available literature, the author developed a psychometric methodology of 27 items for the assessment of physical risk – "PRAI" (Physical Risk Assessment Inventory). Two indirect factors were identified during the verification of this methodology, which explained many of the differences in the assessment of physical risk. Llewellyn (2003) initially indicated them as "sports" and "health" factors. He developed the hypothesis that high-risks sportsmen and the people taking major health risks had independent risk profiles.

Within the frame of the concept of super-situational determinants of risk behaviour, risk is viewed as a pragmatic tendency as well, related to measuring the chances of success or failure of the activity (Ahlgin, 1989). The inclination towards risk as a stable super-situational personal characteristic could be found in two basic forms: predisposition towards motivated risk, and towards unmotivated risk. On this basis, the concepts of "motivated" and "unmotivated" risk have been defined in psychological literature.

Defining the concepts of "motivated" and "unmotivated" risk is related to the domination of the beneficial, respectively unfavourable consequences of the behaviour within the subjective expectations.

Motivated (justified, reasoned, argued, expedient) risk is a feature of the activity, in which the subjective assessment of the chosen alternative is dominated by the expectation of success over the prospect of failure. In this case the chance of achieving the set goal, as well as the probability for an unfavourable outcome of the activity and the onset of undesirable consequences. Ahlgin (1989) notes that motivated risk is often related to a choice from among several practically possible options, of the relatively less attractive but safer way.

Motivated risk, according to Kondratskiy (1982) encompasses behaviour oriented towards reaching socially significant goals, with the subject moving from the feeling of high responsibility towards the accomplishment of the goal. Attention is directed mainly towards the parity between the requirements of the situation, the person's skills and their mobilisation, consistency and self-control.

The motivated and expedient risk is taken for a specific purpose (self-assurance, money, career, etc.) and is always supported by situational advantages.

In the case of the *unmotivated* (unjustified, unreasoned, unargued, inexpedient) risk, the behaviour is determined by necessities from an affective perspective: an urge to savour the experienced danger, the desire to satisfy one's narcissism, etc. In this context, the most commonly viewed risk is related to entertainment, gambling, etc. (Tversky a. Kahneman, 1982; Heimer, 1988).

Kondratskiy (1982) summarises that a specific feature of the people prone to unmotivated risk is insufficient assessment of the situation's requirements, as well as inadequate self-assessment in terms of overestimating one's own abilities for control over the situation. It is exactly due to such factors that a subjective confidence about the success of the taken risky action arises in the unmotivated actors.

Along with the unjustified and justified acceptance of risk, Kondratskiy (1982) also establishes another term to describe certain actions – "excessive unjustified caution." People exhibiting such a tendency in behaviour, even though not usually creating risk situations on their own, often find themselves incapable of overcoming them successfully when they find themselves in such situations, and become the victims of their own indecisiveness. They choose between behavioural alternatives, in which the risk is minimized or completely absent, thus often preferring unjustified weaker results.

Deep internal involvement in the situation of risk-taking is accompanied by sensations of anxiety, weariness and emotional tension (Ahlgin, 1989). Therefore, in order for subjective risk to be theoretically understood, it is important to observe behavioural expressions in situation with high personal significance, accompanied by exhibited activation of the motivation-emotional and will-related components of the personality structure.

Ahlgin (1989) supports the fundamental theoretical thesis that every activity removes dissonance relations between the individual and the environment and is inevitably measured up to the object of the necessity - i.e. it is motivated in all cases, realised or not, by a subjectively "beneficial" goal. Thus, the researchers' attention is directed towards finding a hidden motive, which is integrated into the other active motives, providing harmony between the individual and the environment. Therefore, when observing "unmotivated" actions, they seem to be the result of errors in the activity. They, in turn, are explained through lack of preparation for the activity, low awareness, lack of perception, etc.

In a series of experiments, Petrovski (1975) found that a phenomenon occurs under such circumstances: sometimes one can feel a strong attraction towards danger and takes seemingly unjustified actions, involving them into a dangerous situation. Experimental arguments supporting the thesis of the existence of such "unmotivated" activity can be found in the works of Arkes (1988), Heimer (1988). The general hypothesis consists of the notion that one of the possible forms of the activity, which supposes the situation of potential threat, is an activity directed towards the danger, existing as a result of the subject's free choice. In other words, it is assumed that the person is capable of taking risk without using any situational advantages. In this case the risk should be viewed as "selfless" and "spontaneous." Thus, in all experiments conducted by Petrovski (1975), freely chosen proximity to danger was observed regardless of the nature of the stressor.

In this case the observed phenomenon does not coincide with the person's tendency towards external forms of self-assurance, the motivation for achievement, the expression of situational level of claim, or the inclination towards motivated risk as the choice of a reliable option, guaranteeing the preservation of what was gained. With analogical arguments, Szafraniec (1987) also assumed

the existence of a specific, relatively independent activity of the subject, expressed as a tendency towards “selfless”, i.e. unmotivated risk.

Petrovski (1975) provides experimental evidence that risk is not only a feature of the activity, which satisfies necessities and motives, external with regard to risk, but it is also a necessity in its own right and a motive for activities for the sake of risk itself, without additional accompanying motives, and a variety of unmotivated risk.

It is necessary to distinguish the concepts of “inclination towards risk” and “thrill seeking” in Zuckerman. In *thrill hunting* both the activity’s source and goal (stimulation of the senses even if risk is involved) is the person itself, i.e. the result is entirely subjective and the target is the person engaging in the activity. Thus, both the goal and the result are locked within the personality. *Risk inclination* is invariably related to activity aimed at two types of results: objective (career, money, health, etc.) and subjective (pleasure, satisfaction), i.e. the goal of the activity contains the objectivation of the result, as much as it could exist outside the person. Because of this, the research toolkits are made up of situations with an element of danger and ambiguity, in which the respondent has to make a choice of behaviour mostly for the sake of something (a goal) outside them. The inclination towards risk suggests activity towards an object external to the subject. The inclination towards unmotivated and the inclination towards motivated risk are distinguished in accordance with the extent of the subjective perception of the ambiguity, within which the subject is willing to act. In the case of unmotivated risk, the subjective probability for a successful outcome is greater than or equal to the probability of failure, based on a realistic assessment and consideration of the situational advantages and barriers to the activity. With unmotivated risk, the subjective probability of successful outcome is less than or equal to the probability of failure, and the conditions the activity occurs in are ignored or insufficiently assessed. It can be expected that motivated and unmotivated risk correspond to prognostication as a personal quality of the actors.

H. Schubert created the RSK test to investigate the risk inclination, with 25 thematically related specific situations including a recognisable danger, a certain degree of uncertainty of outcomes and the option to choose among alternatives. The evaluated person should determine their choice of behaviour by placing its answer in a five-degree descending rank scale. The score 1 means a positive response (i.e. taking the risk), while the score 5 0 refusal to perform the risky action.

The financial psychologists Rudiger von Nitzsch (Goldberg, von Nitzsch, 2004), and California university professors Brad Barber and Terrance Odean (Velev, 2007) demonstrated that men are much more inclined to trust their intuition and knowledge, could make less motivated decisions and therefore, overestimate their own prognoses, trade more intensively and take more risks. Thus, they could realise either considerable gain or losses. That is why, environmental factors which are beyond their control, are interpreted as factors carrying a greater risk. Women make a more detailed study of companies, trust advices at a greater extent, think over their choices more thoroughly, trade less intensively and maintain a more stable portfolio over time. In connection with this analysis performed in 1989, 60% of women and 40% of men avoid taking financial risks. Another research conducted by Frederick from MIT about the relationship between IQ and patience or attitude to risk has shown that women with higher IQ scores are more prudent, while men with higher IQ scores were more inclined to behave in a risky manner (Velev, 2007).

The case with the 31-year-old French broker Jerome Kerviel that had gained a widespread popularity in the early 2008 could be analysed in this sense. He had traded with an amount of money, much exceeding the profit of the best top managers. The exchange psychologist Rudiger von Nitzsch has analysed this case and suggested that the broker has not intentionally did harm to the bank. He, however, has succumbed to a stereotype fixation of the perception, proper for people working with abstract data (digits, Euro profit etc.), losing the real idea of what is standing behind them. In fact, the broker lives through the PC keyboard. Demonstrating a high inclination to risk, the French broker found himself in a vicious circle - the greater the losses, the higher the risk taken

to cover them is. „When the outcome is repeatedly negative, the losses become enormous. That is why there are definite restrictions to the risk, which should prevent falling in this vicious circle. A man experiencing enormous losses should take one of two possible ways – either to admit or lose, or to continue the game with the theoretical chance to win. As practice shows, in such circumstances men tend to take a risk at a higher extent than men in a winning position” (Angelova, 2008).

The California University professors Barber and Odean have investigated 35,000 household over 6 years. Men were shown to trade by 45% more frequently than women, and their net returns were reduced by 2.65% due to transaction fees compared to 1.72% for women. The net annual profit of women was by 1.1% higher vs that of men (Velev, 2007). That is, to have equal profits, men should earn by 1% more. To achieve that goal, they take more risks.

According to Barber and Odean, women are more prudent with their financial decisions due to several reasons (Velev, 2007): 1. The remuneration of women is, in average, by 30% lower than that of men; 2. Women have usually maternity leaves periods in their careers due to, i.e. they work less; 3. Women live longer. Therefore, by the time of retirement, the capital of women is less than that of men, but they need more money than men as their life expectancy is longer. That is why women plan more, obtain detailed and precise information about the companies they invest in, do not hurry with their decisions and do not take unjustified risks. In such a way, they are protected from the risk of frequent mistakes, as it is not previously known whether the time or their assets would be enough for compensation. The authors affirm that at present, most women trade in such a way unlike men.

Velev (2007) has made other calculations too: according to the present Bulgarian legislation, men retire from work at 65 years of age, and women – at 63 years of age. It is not without significance – if a 25-year-old man and woman begin to invest BGN 600 each year, with annual profitability of 10% by the time of their retirement, the man would have 292,000 accumulated over 40 years and the woman – only 250,000 for 38 years, provided that their salaries are the same, which is a rare case. That is why the gender could be regarded upon as a factor, determining the different investment strategies of men and women.

The aforementioned interpretations assume that economic incentives are the reason for the lower inclination to risk. These conditions assign gender-related characteristics to women as “more calculating” and “more evaluating” than men. This thesis is absolutely unsupported by empirical data. In fact, the explanation of the gender-related differences in economic activity (including the risk inclination), the authors did not take into consideration psychological differences, influencing the behaviour. In chapter 4, p. 1 for instance, they present results for the relationship of the “sensation-seeking” scale (a predictor of risky behaviour) to the gender, but also to neuroticism. It is long acknowledged from EPQ-R-S norms (Eysenck Personality Questionnaire, Roberti, 2004), that women are considerably more neurotic than men and therefore, more emotionally labile. This means a limited psychic resource for coping with critical, extreme, risk situations.

As the perception of risk entails a significant excitement and anxiety, the increased emotional liability of women reduces their potential to cope with negative psychic states, accompanying risk. Therefore, the refusal of women to take risks is most probably a compensation of increased neuroticism, manifested as a protective (with respect to risk) behavioural strategy.

McCall (1997) interprets people taking financial risks as attempting to be not only traders, but the best among traders. The risk is defined by the author as a simultaneous existence of a risk and potential possibility, with uncertain outcome. He describes the attractiveness of the potential possibility and danger as stimuli for risky action, which are usually not realised. He proposed a hypothesis, opposite to what is obvious: people with professional qualification should destroy their cognitive schedules, to take risk by breaking their dispositions. In his view, the old concepts related to financial risk are rather externally renamed in modern economic models. The authors’ main concern is that in fact, these systems are a combination of previous concepts with varying degree of

clarity. None of them, however, presents a model or a respective paradigm for learning and tuition quality, needed to increase competences (the same thesis is supported by Llewellyn, 2003).

There is enough ground to formulate a theoretical hypothesis for relevance between the three risk types (as per Kahneman's model) and the risk inclination (as per Schubert). People with low risk inclination in the three Schubert's subscales (motivated, non-motivated and for the sake of the risk itself) are in fact designated by Kahneman as „risk-avoiders”. In people avoiding risk, the four scales of sensation-seeking should be poorly manifested. Moderate and high degrees of subscales “motivated” and “non-motivated” risk (as per Schubert) are respectively designated by Kahneman as “risk-reducers” and “risk-optimisers”.

It could be concluded that people prone to a high-risk behaviour subjectively evaluate risk as higher, but also have more optimistic general expectations with respect to the future results of the action.

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