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**CORRELATION BETWEEN RISK-TAKING AND RISK-AVERTING BEHAVIOR  
DURING THE WHITE-COLLAR CRIME PERPETRATING:  
EMPIRICAL FINDINGS FOR MOLDOVA AND ISRAEL**

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This article constitutes an independent scientific research in Criminology. Especially, authors have done their best to explain and to prove the correlation between risk-taking and risk averting behavior during the white-collar perpetrating. Authors have demonstrated that risk is not only a probability of losses but also forms a threat of unpredictable development of events. As a consequence, when a person avoids risking it is also a risk because there appears a great likelihood of undesirable expansion of events outside the risk. New theoretical concepts are formulated on the base of empirical findings obtained from the correlation of the personality traits (Extroversion, Agreeableness, Neuroticism, Openness and Consciousness) in male and female white-collar offenders predisposed to risky decisions in business administration because such decisions are based on intuition and there is detected a deficiency of reasonability.

By means of empirical research based on psychological experiment and sociological interview of the white-collar offenders and the control groups there have been proved that inclination to risk being a quality of a person (a personality trait which is expressed in a permanent tendency to use new possibilities) in some cases can indicate to a propensity of a person to commit white-collar crimes.

**Keywords:** *risk, likelihood of fraud, white-collar crime, detected risk, potential risk, inclination to risk, Classical Decision Theory, Conventional Decision Theory, risk preference, risk taking, risk averting, intuitive solution in white-collar crime perpetrating.*

**CORELAȚIA DINTRE COMPORTAMENTUL CENTRAT PE RISC ȘI CEL BAZAT PE  
EVITAREA RISCULUI ÎN PROCESUL COMITERII INFRAȚIUNII „GULERELOR ALBE”:  
DATE EMPIRICE PENTRU MOLDOVA ȘI ISRAEL**

Acest articol constituie un studiu științific independent în materia de criminologie. În special, autorii au încercat să explice și să demonstreze corelația dintre comportamentul centrat pe risc și cel bazat pe evitarea riscului în procesul comiterii infracțiunii gulerelor albe. Autorii au demonstrat că riscul reprezintă nu doar o probabilitate de pierderi, dar și constituie o amenințare prin evoluția imprevizibilă a evenimentelor nepreconizate. Ca rezultat, persoana care evită riscul la fel riscă, deoarece apare o probabilitate majoră a expansiei evenimentelor în afara riscului. Conceptele teoretice noi au fost formulate în urma rezultatelor empirice obținute din corelația trăsăturilor personalității (Extroversiune, Agreabilitate, Emotivitate, Sinceritate și Conștiință) la bărbați și femei condamnați pentru săvârșirea crimelor gulerelor albe, care au fost predispuși spre luarea deciziilor riscante în business și administrație, deoarece astfel de decizii sunt bazate pe intuiție și se atestă rezonabilitate scăzută.

Prin intermediul procedeele empirice bazate pe experimentul psihologic și interviul sociologic al criminalilor „gulerelor albe” și al grupurilor de control a fost demonstrat că înclinarea spre risc este calitatea persoanei (trăsătura personalității exprimată în tendința permanentă de a utiliza posibilități noi) și în unele cazuri poate indica la predispunerea acesteia la săvârșirea crimelor gulerelor albe.

**Cuvinte-cheie:** *risc, probabilitate de risc, crima gulerelor albe, risc detectat, risc potențial, înclinare spre risc, teoria deciziei clasice, teoria deciziei convenționale, preferință de risc, asumarea riscului, evitarea riscului, soluție intuitivă în comiterea crimelor gulerelor albe.*

**Introduction**

*Risk* is a concept linked to human expectations. It indicates a potential negative effect on an asset that may derive from given processes in progress or given future events. In the common language, risk is often used as a synonym of probability of a loss or of a danger.

Both from a scientific and a business perspective, “*risk*” implies some level of knowledge that allows more precise measurement and assessment of the vulnerability of organizations to white-collar crime. In criminology there is suggested that risk to economic security is one of the basic risks which directly put into the danger state security. There is considered that the basic economic risk to the financial structure of a country is provoked by organized crime and its structures [1, p.27-30]. Indeed, we can recognize the assumption that

white-collar criminality is a form of organized criminality. Risks can be divided into two groups: *detected* and *potential*. A detected risk is considered to be a consumed act or a recognized risk which means the violation of the legislation is already done and authorities possess such information. At the same time, a potential risk constitutes a risk which is not exposed but there are premises favorable for its appearance [2].

Any risk includes two components: *a potential risk* (comprehension of a likelihood of some danger) and *an actual risk*, which means a risky action which can be regarded as a particular incident of a social action if it is committed in the realm of existing social norms and social order. The situation is considered to be risky if the knowledge about its potential dangerousness or threat is fixed already in the past social experience of the person [3, p.159].

In our society there is a phenomenon when a modern person *can be taught to risk*, especially that, personal risk is generated and stimulated by external factors, consequently there is formed a certain norm of risky behavior and this is already an element of personality socialization. Preference to risk can be learned very easy, it becomes a way of life [3, p.159-160].

*Inclination to risk* is considered to be a quality of a person; it is a personality trait which is expressed in a permanent tendency to use new possibilities. At the same time, managers must avoid risky decisions, but it depends on the specific of corporation, for example, inclination to risk is constitutes a very good factor for a successful work inside a broker firm, while in a company which is occupied with audit and financial inspection of other corporations.

### Discussion and obtained results

**Risk for fraud** is a combination of opportunity and possibility, incentives and pressures, and rationalization and justification.

In **Classical Decision Theory**, risk is most commonly conceived as reflecting variation in the distribution of possible outcomes, their likelihoods, and their subjective values. Risk is measured either by nonlinearities in the revealed utility for money or by the variance of the probability distribution of possible gains and losses associated with a particular alternative [4, p.1404]. Risk has become increasingly a term referring not to the unpredictability of outcomes but to their costs, particularly their costs in terms of mortality and morbidity. Risk becomes hazard (in sense of vulnerability), the expected value of an outcome rather than its variability; and the central insight of theories of decision-making under risk, the importance of considering the whole distribution of possible outcomes-tends to become obscured in considerations of risk. The idea of risk is surrounded by the larger idea of choice as affected by the expected return of an alternative [4, p.1404].

In **Conventional Decision Theory** formulations, choice involves a trade-off between risk and expected return. A risky choice is one with a wide range of possible outcomes. From the latter perspective, a risky choice is one that contains a threat of a very poor outcome.

Practically all theories of choice assume that *decision-makers prefer larger expected returns to smaller ones, provided all other factors (e.g., risk) are constant*. In general, they also assume that decision-makers prefer smaller risks to larger ones, provided other factors (e.g., expected value) are constant. Thus, expected value is assumed to be positively associated, and risk is assumed to be negatively associated, with the attractiveness of an alternative [4, p.1406].

Risk-option decision-making refers to individuals who foresee negative financial outcomes for their business and thus have a tendency to take more advanced risks. They can either be inspired by a role model or by stress leading to desperate actions. The empirical support for this is rather well established in terms of low-frequency offenders who take advantage of a situation only when they perceive a crisis. To manage risk correctly, we must acknowledge its positive and negative effects. Risk management has to look at both the downside of risk and the potential upside. In other words, risk management is not just about minimizing exposure to the wrong risks. It also is about increasing exposure to good risks [5, p.9].

**Risk management** is a systematic activity of elaboration and implementation of the preventing measures, the process of risk reducing, evaluation of the proficiency of such measures as well as analysis and modification of the information used by the control authorities [2].

**Risk-taking** is valued and treated as essential to innovation and success. In contrast, the term **risk aversion** has the benefit of long use in the corporate finance community, with consensus on the concept, its measurement, and its implications for behavior. Therefore, *risk-averse* decision-makers prefer relatively low risks and are willing to sacrifice some expected return in order to reduce the variation in possible outcomes. *Risk-taking and risk-averting in business decision-making possess some peculiarities*. Taking risks and dealing with

uncertainty are essential parts of doing business. Effective oversight of risk-taking is a key responsibility of the board. Directors must protect profitable activities ("*the golden goose*") in the face of routine risks and improbable disasters ("*the black swans*").

The enterprise is characterized by *uncertainty in conducting its operations: uncertainty is an inherent element of enterprise risk*. There is no enterprise without risk. Rewards earned by an enterprise compensate for such risk-taking [2]. The premise of capitalism as practiced is that those who willingly risk money on a business venture have the opportunity to either gain or lose, but the choice is theirs. *Taking away the possibility of losing also means taking away the possibility of succeeding* [6, p.26].

Good risk taking requires good risk-taking personnel, but what are the characteristics of a good risk-taker? Research in the last few decades suggests that good risk takers have the following characteristics: 1) they are realists who still manage to be upbeat; 2) they allow for the possibility of losses but are not overwhelmed or scared by the potential for losses; 3) they keep their perspective and see the big picture, even in the midst of a crisis; 4) they make decisions with limited and often incomplete information [5, p.45].

Managers, in their personal capacity, should be subjected to liability (*personal liability*) in order to better deter excessive corporate risk-taking. They take risks and exhibit risk preferences. A manager who fails to take risks should not be in the business of managing. Higher level managers feel there is a definite need to educate new managers into the importance of risk-taking. Managers associate risk-taking more with the expectations of their jobs than with a personal predilection. *They believe that risk-taking is an essential component of the managerial role*.

At the same time, March J.G. and Shapira Z. have demonstrated business managers avoid risk, rather than accept it. They avoid risk by using short-run reaction to short-run feedback rather than anticipation of future events [4, p.1409]. They avoid the risk of an uncertain environment by negotiating uncertainty-absorbing contracts. They care about their reputations for risk-taking and are eager to expound on their sentiments about the deficiencies of others and on the inadequacy of organizational encouragements for making risky decisions intelligently.

Indeed, managers see themselves as taking risks, but only after modifying and working on the dangers so that they can be confident of success. Prior to a decision, they look for risk controlling strategies. Most managers believe that they can do better than is expected, even after the estimates have been revised [4, p.1411].

Managers are inclined to show greater tendency toward risk-taking when questions are framed as *business decisions* than when they are framed as *personal decisions* [4, p.1409]. *Excessive risk-taking is widely regarded to have been a principal cause of the financial crisis* [7, p.534]. Excessive corporate risk-taking is not criminal *per se*, or even criminally fraudulent. Although most of the actions leading to the financial crisis represented excessive corporate risk-taking, that risk-taking largely resulted from poor decisions, bad judgment, and greed, and not criminal intent [7, p.538].

In the traditional corporate governance context, *managerial decisions including risk-taking decisions are protected to some extent by the Business Judgment Rule*, which presumes that managers should not be personally liable for harm caused by negligent decisions made in good faith and without conflicts of interest, and in some articulations of the business judgment rule, also without gross negligence. On its face, at least, the *Business Judgment Rule* should apply to managers trying to predict consequences of corporate risk-taking to the public.

*An individual's risk preferences* can have an impact on their decisions with respect to crime. The following assumptions are made: crime results in higher earnings than legitimate activities; decisions are made by individuals who care only about maximizing expected income; there are only monetary punishments available as a remedy for white-collar crime in the form of fines; individuals are risk neutral; and the only three factors individuals consider when contemplating crime are: a) the gains from crime; b) the probability of being caught and c) the severity of punishment [8, p.15].

It is possible that *risk preference is partly a stable feature of individual personality*, but a number of variable factors such as mood, feelings, and the way in which problems are framed also appear to affect perception of and attitudes toward risk. In particular, *when dealing with a risky alternative whose possible outcomes are generally good (e.g., positive monetary out-comes), human subjects appear to be risk-averse; but if they are dealing with a risky-alternative whose possible outcomes are generally poor, human subjects tend to be risk-seeking* [4, p.1406].

Women are different from men in their choices and preferences. Especially, women generally have a higher degree of *risk-aversion* than men. There is an assumption that the extent of rationalization and justification is less prominent among women [9, p.263-268]. It is the female fear of being caught, where women perceive a greater subjective risk than men, and where the consequences of imprisonment are perceived worse by women than men, mainly because of social collapse that follows after time in prison [10, p.195.]. Women have a lower level of acceptable fear than men. It means that women generally experience more fear than men when they are exposed to the same objective risk [11, p.33-34]. Female directors are more benevolent and universally concerned, but less power-oriented than male directors. However, in contrast to findings for the population, they are less tradition and security oriented than their male counterparts. They are also more risk-loving than male directors. Thus, having a woman on the board needs not lead to more risk-averse decision-making [12, p.28]. The level of acceptable fear, combined with perceived risk – *which is subjective* – has an impact on actions, where women with more fear at higher risk will avoid criminal activities [12, p.28].

We believe that the characteristics of white-collar criminality are compatible to a model of *Rational decision-making* to a very limited degree and it would be correct to study an *Intuitive decision-making model* that is also based on rationality however very limited one.

**An intuition** is a recognition or judgment that is: arrived at rapidly, without deliberative rational thought; difficult to articulate verbally; based on a broad constellation of prior learning and past experiences; accompanied by a feeling of confidence or certitude; affectively-charged [13, p.181]. According to the golden rule – “*The intuitive decisions are opposite to the critical thinking*”.

*An intuitive solution* includes: decision based on experience; decision based on sensations and emotions; decision based on knowledge and education; decision based on an unconscious mental process; decision based on personal values and ethics [14].

*Can we really assume that all criminals make rational decisions to commit a crime?* Individual preferences, psychic factors, and other motivations for crime may play an equally large role in explaining crime. We presume that *there isn't any pure rational decision model and that the study of decision and human judgment is characterized in the tension between the rational model that is in the basis of economy and management theory and between psychological considerations that occasionally are not compatible with the principles of rational decision.*

Bringing to our minds *the intuitive processes in risk perception* we have to remember that particularly under conditions of everyday life, our thoughts and actions are often guided by processes, other than elaborate cognitive reflections. One such development is the ‘*risk as feelings*’ model. People explicitly assess severity and likelihood of possible outcomes and integrate this information to arrive at a decision. Instead, it is proposed that people react to the prospect of risk at two levels: they evaluate risk cognitively, but simultaneously they also react to it emotionally, with minimal cognitive processing. These emotional or intuitive reactions depend on contextual factors like: immediacy of risk; the vividness with which consequences can be imagined; previous experiences with consequences; visceral states (e.g., hunger, sexual arousal); background mood.

To summarize, *the role of affect and intuition* has gained momentum in theoretical accounts of risk research over the past few years. We consider that not all crimes can be categorized as a manifestation of rational behavior. Consequently, economists have begun to question whether the standard assumption of rational behavior holds when considering why individuals engage in criminal activity [15, p.271].

Compatible with our point of view *consistency is only one aspect of the lay notion of rational behavior.* The common conception of rationality also requires that *preferences or utilities for particular outcomes should be predictive of the experiences of satisfaction or displeasure associated with their occurrence.* Thus, a man could be judged irrational either because his preferences are contradictory or because his desires and aversions do not reflect his pleasures and pains [16, p.26].

As a result, in light of the stated in professional literature so far, *our assumption is that the characteristics of white-collar criminality are compatible to a model of Rational decision-making to a very limited degree and it would be correct to study an Intuitive Decision-making model that is also based on rationality nevertheless very limited one.*

In the realm of this scientific research we decided to verify the viability and reliability of the Big Five Test of personality traits in order to demonstrate the reasonability of behavioral criminology findings in the process of reduction of white-collar crimes. Our empirical survey was performed with participants from both of countries (Israel and Moldova). The basic purpose has been consisted from the *demonstration of the*

*significant influence of personality traits upon the phenomenon of workplace behavior expressed in the perpetrating of white-collar crime.*

We decided to achieve the best scientific results for our research by means of executing of several statistical surveys both in Moldova and Israel. Our starting point is that the characteristics of white-collar criminality are compatible to a model of rational decision-making to a very limited degree and it would be correct to study an intuitive decision making model that is also based on rationality however very limited one. It seems that this theory can undermine the economic model that deal in crime.

Our model elaborated for and directed to reduction (decrease) of white-collar criminality is based on several hypotheses. According the improper behavior missing part on studies – the current study have integrated the personality traits of the examined subjects, with the Intuitive Model of D.Kahneman and A.Tverski.

The whole population who took part in the empirical examination is presented below: 1) the total number of offenders finally convicted for white-collar crimes in Moldova and Israel – *119 of persons*; 2) the total number of non-offenders (the control group) in Moldova and Israel – *158 of persons*; 3) the number of the persons convicted for theft from Moldova (the control group) – *41 of persons*; 4) the total number of persons who have taken part in the examination – *318 of persons*.

Our examination has been originated from the gender characteristics and the social status of the participants:

- *Gender characteristics* – 63% are men; 68% are women;
- *Age characteristics* – 83% are above 31 years old;
- *Education* – 90% of the respondents have graduated universities (high school).

In order to obtain valid results, there have been formulated several suppositions for the categories of populations who have take part in the questionnaire:

***Hypothesis No.1 – There is a correlation between the criminal reason (motive) of the crime, from one side, and deterrence to perpetration of an offence, from another side; as well as between the level of rationality of the perpetrating of an offence and the capital accumulated as a consequence of the criminal thinking.***

There are performed two types of correlation: 1) correlation performed on the base of the persons from Moldova who are convicted for white-collar crime *versus* persons from Moldova who are convicted for theft; 2) correlation performed on the base of the persons from Moldova who are convicted for white-collar crime *versus* persons from Israel who are convicted for thee same categories of crime.

In the limits of this examination the element “*r*” is defined like in statistics, the “*person-product-moment*” correlation coefficient, or simply correlation coefficient; “-” the minus means a negative correlation; and “*P values*” is calculated probability, or, in other words, is the probability of finding the observed, or more extreme results when the null hypothesis ( $H_0$ ) of a study question is true – the definition of ‘*extreme*’ depends on how the hypothesis has been tested.

The findings are supposed to confirm the hypothesis that ***personality traits as independent variables are supposed to be different between different sectored population according to the studied dimensions of personality***. If fact, it was found that there is a significant difference between men and women who are not white-collar criminals in the two dimensions of most significant personality traits: *Conscientiousness* ( $P_v=0.0015$ ) and *Agreeableness* ( $P_v=0.0412$ ).

In such a manner, we intended to perform an analysis of correlations existed between personality traits of two sectors of population (offenders and non offenders (male and female)) regarded as dependent variables. Therefore, *in the first stage*, the examination has been conducted through a one-way variance test, which has demonstrated that there has been detected a significant correlation between the two sectors and each one of the traits of personality (Big-Five) characteristics. *In the second stage*, a Bonferroni test has been performed for each dependent variable of the personality traits. This study intends to bring to the whole research findings which will be able to demonstrate the difference between different categories of populations concerning every personality trait which was selected for the analysis.

In the first stage, the examination has been conducted through *a descriptive statistic method* about risk and 5 variable cross-sections, which has examined where is a difference between the five sectored population based on Big-Five correlation formula.

The purpose of Tukey’s test is to determine which groups in the sample are different. The result will found if the means are with the same letter are not significant difference.

We have presented our results in several tables, where are written the meaning, the number of participants and the group which has taken part in the questionnaire. Therefore, we created four tables, as the following:

– Dependent Variable – *Agreeability*:

Table 1

Tukey's Test Grouping	Mean	Number	Group
A	3.9954	98	Israel A control group non offenders
A	3.9105	70	Israel White-collar offenders
B	3.4736	60	Moldova A control group non offenders
B	3.4321	41	Moldova theft offenders control group
B	3.2948	47	Moldova White-collar offenders

– Dependent Variable – *Conscientiousness*:

Table 2

Tukey's Test Grouping	Mean	Number	Group
A	4.25445	70	Israel White-collar offenders
A	4.12188	98	Israel A control group non offenders
B	3.50172	60	Moldova A control group non offenders
B	3.40650	41	Moldova theft offenders control group
B	3.33658	47	Moldova White-collar offenders

– Dependent Variable – *Neuroticism*:

Table 3

Tukey's Test Grouping	Mean	Number	Group
A	3.5000	41	Moldova theft offenders control group
A	3.4000	47	Moldova White-collar offenders
B	2.7617	60	Moldova A control group non offenders
C	2.3990	98	Israel A control group non offenders
C	2.3719	70	Israel White-collar offenders

– Level of Risk Results on the sample of Moldova and Israeli Populations:

Table 4

Group	Number of participants	Meaning
Israeli White-collar offenders	68	3.529412
Moldova A control group non offenders	60	3.766667
Moldova White-collar offenders	47	3.617021
Moldova theft offenders control group	41	3.048780
Israeli A control group non offenders	87	4.057471

The prominent fact in the distribution of findings on the subject of deterrence is – that we observe a great difference between the groups from Israel and the groups of Moldova as follow:

– About 72%-74% of groups from Israel and only between 0%-6% groups of Moldova - consider that a white-collar criminal does not think about anything except for the perpetration of an offence as "*it would not happen to me, I would be apprehended*";

– By the contrast, 12%-19% of Israeli groups and 30%-49% groups of Moldova, consider that fear of being apprehended constitutes an element of deterrence;

– At the same time, the subject of severity of punishment does not constitute a deterrent factor for groups from Israel (2%-3%) in the same manner as for groups from Moldova (37%-48%).

After it, the populations submitted to our testing questionnaires have been asked whether a manager who would think about perpetrating an offence of fraud or deceit at his workplace, would make a rational decision for perpetration of an offence and consider all the implications and outcomes of the act. It was demonstrated a significant difference between Israeli control group of non-offenders and Israeli group of white-collar offenders, who according to our results are more likely to be predisposed to commit crimes only by the impulse, when the person is realizing the fact that has the opportunity to perpetrate the crime and gain money.

We observe a difference between testing groups from Israel and Moldova in the following matters:

– 26%-30% of population groups from Israel and 49%-56% population control groups of Moldova are more likely to accept the idea that the manager, who would think about perpetrating an offence of fraud or deceit at his workplace, would make a *rational decision* for perpetration of an offence and consider all the implications and outcomes of the act.

– Only about 30% of Israeli WCC offenders and only about 43% of Moldova white-collar offenders are thinking that white-collar crime is committed as a result of a rational decision of the offender.

All at once, we have demonstrated that both Israeli selected populations for questionnaires, as well as Moldavian groups are characterized by the same level of thoughts and personal attitude concerning the decision-making process to commit white-collar crimes.

Especially, the majority of them believe, that the basic criterion which determines the perpetration of white-collar crime is the level of *financial welfare of the potential criminal* (the amount of assets and financial resources) *antefactum* that is preceding in time the decision of white-collar crime perpetrating:

– Israeli control group of non-offenders accept such idea in the score 75%, oppositely Israeli group of white-collar criminals think the same only in 48% of the cases;

– Moldavian control group of non-offenders believe in such postulation in the score of 78%, oppositely Moldavian control group of the criminals convicted for theft in the score of 54% and Moldavian group of White-collar criminals only in 49%.

According to our point of view, the difference between the offender and non-offender groups in both of the countries is determined by the way of rationalization which the offender accepts for himself.

Finally, we have observed *the direct causal relationship between the level of financial welfare and the willingness to perpetrate a white-collar crime*. What does it mean? From our standpoint, the answer can be found in the level of internal moral satisfaction and subjective sensation of wellbeing of every perpetrator. So, if subjectively a person is satisfied in his material assets and financial welfare, he will think twice before the perpetrating of a white-collar crime, or will refuse to commit it. So, such a result permits us to assume, that the impulsive and irrational decision of white-collar crime perpetrating is characterized to the person who feels a stringent need for enrichment. At the same time, the richer is the person, the higher is the level of his material requirements and financial expectations.

As a result, we have found that there are no significant differences between the populations in the personality trait of *Agreeableness*, in such a manner the test reveals to the research that two groups are created: on one hand, a group "A" of women (non-criminals) and woman (convicted criminals) and, on another hand, group "B" of men (non-criminals) and men (convicted criminals). More than it, on the base of the obtained results we have proved that there is no significant difference between criminals divided in the function of their gender characteristics. At the same time, our findings indicate the significant difference between men and women only based on this variable.

**Hypothesis No.2 – There is a correlation between Big-Five Personality Traits (Extroversion, Conscientiousness, Agreeableness, Openness and Neuroticism) and decision-making process in white-collar crime.**

There are performed several types of correlation: 1) correlation performed on the base of the persons from Moldova who are convicted for white-collar crime *versus* persons from Israel who are convicted for the same categories of crime; 2) correlation performed on the base of the persons from Moldova who are convicted for white-collar crime *versus* persons from Moldova who are convicted for theft; 3) correlation performed on the base of the non-offenders from Moldova and Israel (control groups); 4) correlation performed on the base of the persons from Israel who are convicted for white-collar crime *versus* non-offenders from Israel; 5) correlation performed on the base of the persons from Moldova who are convicted for white-collar crime *versus* non-offenders from Moldova.

We decided to substantiate the premise *that personality traits as independent variables are invented to be different between different categories of populations according to the studied originated on the psychological dimensions of personality*. Actually, it was found that there is a significant difference between men and women who are not white-collar criminals in the two dimensions of most significant personality traits: *Conscientiousness* ( $P_v = 0.0015$ ) and *Agreeableness* ( $P_v = 0.0412$ ). It is relevant to define "*P Values*" – *it is a calculated probability, or, in other words, the probability of finding the observed, or more extreme, results when the null hypothesis ( $H_0$ ) of a study question is true – the definition of "extreme" depends on how the hypothesis is being tested.*

Concerning the risk, we have found using the Wilcoxon Scores and, Kruskal-Wallis Tests ( $P_v = 0.4517$ ), that there is no significant difference detected between women and men who are not white-collar offenders in the realm of risk-taking concept.

We have obtained the conclusion that offenders are inclined and disposed more to take risks over them than men and women from the control group (non-criminals). This fact helps us to demonstrate the difference in the way of thinking and, as a consequence, a method of taking risks by different categories of population as we have planned before: based on gender characteristic and based on previous conviction for white-collar crime.

**Hypothesis No.3 – There is demonstrated the high level of risk-taking in case of the persons who are willing to take upon themselves risks for crime perpetration.**

There are performed several types of correlation: 1) correlation performed on the base of the persons from Moldova who are convicted for white-collar crime *versus* persons from Israel who are convicted for the same categories of crime; 2) correlation performed on the base of the non-offenders from Moldova and Israel (control groups); 3) correlation performed on the base of the persons from Israel who are convicted for white-collar crime *versus* non-offenders from Israel; 4) correlation performed on the base of the non-offenders from Moldova and Israel (control groups); 5) correlation performed on the base of the persons from Moldova who are convicted for white-collar crime *versus* persons from Moldova who are convicted for theft.

In the realm of this Hypothesis we have performed a comparison between the risk variable groups by using *Kruskal-Wallis test*. In order to be clear, we have to mention that *Kruskal-Wallis test* is an extension of the *Wilcoxon test* when it comes to more than 2 groups. Therefore, we have created several tables as well as for the precedent Hypothesis. As a result, four tables have been built:

- Analysis of Variance for Variable risk Classified by Variable group:

Table 5

Group	Number	Meaning
Israeli white-collar offenders	68	3.529412
Moldova control group non- offenders	60	3.766667
Moldova white-collar offenders	47	3.617021
Moldova theft offenders control	41	3.048780
Israeli control group of non-offenders	87	4.057471

- Analysis of Variance for Variable risk Classified by Variable group taking into account expected and standard deviation:

Table 6

Group	Number	Sum of scores	Expected under $H_0$	Standard deviation Under $H_0$	Meaning Score
Israeli white-collar offenders	68	9886.00	10336.0	611.917402	145.382353
Moldova control group non-offenders	60	9325.00	9120.0	584.498201	155.416667
Moldova white-collar offenders	47	6870.50	7144.0	530.974089	146.180851
Moldova theft offenders control	41	4385.50	6232.0	501.703338	106.963415
Israeli control group of non-offenders	87	15589.00	13224.0	663.576380	179.183908

– Risk variable cross-section:

Table 7

Group	Number	Meaning	Standard
Israeli control group of non-offenders	87	4.06	1.35
Moldova control group non-offenders	60	3.77	1.24
Moldova theft offenders control group	41	3.05	0.97
Israeli white-collar offenders	68	3.53	1.40
Moldova white-collar offenders	47	3.62	0.8

– Risk variable cross-section in correlation with Tukey test:

Table 8

Group	Number	Meaning	Tukey Grouping
Israeli control group of non-offenders	87	4.0575	A
Moldavian control group of non-offenders	60	3.7667	A
Moldova white-collar offenders	47	3.6170	B A
Israeli white-collar offenders	68	3.5294	B A
Moldavian theft offenders control group	41	3.0488	B

As a result, significant difference was found between the groups in the variable RISK – By Kruskal-Wallis Test while  $Pr > \text{Chi-Square } 0.0003$ .

Israel non-offenders control group received relatively higher values in comparison with other groups. There have been proved that this category of tested population has the most decreased risk of likelihood to commit a white-collar crime. Also, Moldova control group of theft offenders received the most decreased value. Meaning: This population was found with tend to take the highest taking risk to perpetrate of non White Collar Crime offenders.

But these answers are not sufficient for us. We will do our best to know exactly specific between which groups is the significance differences. Therefore, we have constructed the following table:

In the realm of the following supposition we have found that *there is no correlation between personality traits and risk-taking in the realm of the group of non-criminal men and women*. Values of  $Pv$  are from 0.1282 and higher and that is not within the limit of less than 5% (significance). By contrast, a correlation was found in the group of white-collar offenders (men and women) between the personality trait of *Extroversion*, from one side, and *inclination to risk-taking*, form another side. It was found that the higher is *the level of risk-aversion* in white-collar crime ( $Pv = 0.56847$ ), but the personality trait of *Extroversion* will be decreased ( $Pv = 0.0008$ ), and vice versa. A correlation in similar direction has been found, even if it was weaker, as well in the general population.

In the base of several tests performed, we have obtained the following results: white-collar offenders from Moldova and Israel are not significantly different in their risk-perception when they are ready to commit an offence. We can assume that there is no an essential divergence between those two groups of populations and, consequently Israeli white-collar offenders are ready to take more risk than Moldavian white-collar criminals.

Moldavian theft offenders tend to take higher risks than Moldavian white-collar offenders, but lesser than Israeli white-collar offenders. Moldavian control group of non-offenders is declined to take higher risks than the Israeli control group of non-offenders.

The basic conclusion which we have obtained is the following: the control groups of non-offenders from both of the countries are predisposed lesser to the risk likelihood for white-collar crime perpetrating, in comparison with the selected groups of criminal offenders. Therefore, it can be said that offenders are more risk-taking than groups of non-offenders.

**Hypothesis No.4 – There is demonstrated a significant correlation between the Big-Five personality traits, from one side, and the high level of risk-taking which leads to the perpetration of the white-collar crime, from another side.**

There are performed several types of correlation: 1) correlation performed on the base of the persons from Moldova who are convicted for white-collar crime *versus* persons from Israel who are convicted for the same

categories of crime; 2) correlation performed on the base of the persons from Moldova who are convicted for white-collar crime *versus* persons from Moldova who are convicted for theft.

At least, we can derive the following standpoints: positive correlations which have been found between the personality traits of Big-Five on the level of the populations submitted to the testing are considered to be weak.

**A positive correlation** has been obtained between the following personality traits:

a) *Conscientiousness and Agreeableness*  $r = 0.29434$ ;  $P_v = 0.0006$ ;

b) *Openness and Conscientiousness*  $r = 0.21038$ ;  $P_v = 0.0155$ ;

c) *Extroversion and Openness*  $r = 0.17656$ ;  $P_v = 0.0429$ .

At the same time, **a negative correlation** has been obtained between the following personality traits:

a) *Agreeableness and Extroversion*  $r = -0.17137$ ;  $P_v = 0.0494$ ;

b) *Agreeableness and Neuroticism*  $r = -0.20223$ ;  $P_v = 0.0201$ ;

c) *Openness and Neuroticism*  $r = -0.23959$ ;  $P_v = 0.0057$ .

The examination has been conducted through a descriptive statistics (averages and standard deviations) concerning the phenomenon of Risk-taking and Risk-aversion in the process of decision-making of the white-collar criminals, based on the differences between personality traits of different categories of population. Categories of populations are five-sectored as explained above.

Differences have been found between the five-sectored populations in the variable of personality trait of *Extroversion*. In such a manner the following results have been found:

**Correlation performed on the base of the persons from Moldova who are convicted for white-collar crime versus persons from Israel who are convicted for the same categories of crime:** We have demonstrated that Israeli white-collar criminals are considered to possess higher level in personality traits such as *Extroversion*, *Agreeableness*, *Conscientiousness* and *Openness* in comparison with Moldavian convicted for the same categories of offences. Trait of *Neuroticism* has been found more decreased in Israeli white-collar offenders and higher in Moldavian white-collar criminals;

**Correlation performed on the base of the non-offenders from Moldova and Israel (control groups), from one side, and white-collar criminals from both of countries.**

In general, there have been found that levels of such personality traits as *Agreeableness* and *Openness* in white-collar criminals are lower in correlation with the same control groups of both of the countries.

Moreover, we have obtained the following results in function of the personality trait, which have been submitted to our empirical research. Those results are exposed below:

– **Level of Extroversion** in Moldavian representatives from the control group is lower than the level of the same trait in Israeli representatives of non-offenders (control group). At the same time, surprisingly, level of *Extroversion* in Israeli white-collar offenders is significantly higher than level of the same trait in Israeli non-offenders (control group).

– **Level of Conscientiousness** – in Moldavian white-collar offenders the level of *Conscientiousness* is lower in comparison to Moldavian non-offenders from the control group. By the contrast, the level of *Conscientiousness* in Israeli white-collar offenders is essentially higher than the level of the same trait in Israeli non-offenders from control group.

– **Level of Neuroticism** – in Moldavian white-collar offenders the level of *Neuroticism* is extremely high in comparison to Moldavian non-offenders from the control group. By the contrast, the level of *Neuroticism* in Israeli white-collar offenders is a little bit lower (relatively insignificant) than the level of the same trait in Israeli non-offenders from control group.

### Conclusions and empirical findings

Our empirical survey has contributed to formulation of the conclusion that decision-making process in white-collar crime perpetration is actually an intuitive one, which is expressed in a tremendous influence of personality traits of the perpetrator upon the final result. We believe that decision-making process in case of perpetrating of a white-collar crime, in essence, is considered to be an outcome of excessive risk-taking management due to specific personality traits in inappropriate situations.

According to our opinion, the person who commits a white-collar crime manifests a great portion of self-confidence towards himself, being absolutely convinced that he will be never caught, and, as a consequence, he is thinking intuitively, in other words, not rationally. Such self-confidence is a result of narcissist traits and a dangerous combination of personality traits with clear and evident displacement of his traits to risk-taking tendencies. We can detect an enormous predisposition of the criminal to over-appreciate his own

intellectual powers and to sub-estimate abilities of other people, including legal authorities to detect and to apprehend him. Therefore, we have demonstrated that a white-collar criminal is acting under impulsivity and realizing the opportunity to risk.

In general, we have demonstrated that levels of personality traits such as *Extroversion*, *Agreeableness*, *Neuroticism* and *Consciousness* are significantly higher in the control group of non-offenders from Moldova in comparison to Moldavian white-collar offenders who have taken part in the questionnaire. More than it, we have found that there is a high level of such personality traits of *Extroversion*, *Openness* and *Neuroticism* in the control group of non-offenders from Moldova in comparison to the same control group of respondents from Israel.

Finally, during the correlation performed on the base of the persons from Moldova who are convicted for white-collar crime *versus* persons from Moldova who are convicted for theft (taken like a control group), we have observed that those persons who are convicted for theft, display the highest level of personality traits (*Extroversion*, *Agreeableness*, *Neuroticism*, *Consciousness*) in comparison with Moldavian white-collar offenders.

In conclusion, our preliminary findings have successfully demonstrated that there are significant differences in personality traits among populations selected for research from both of the countries (Moldova and Israel). According to our opinion, the exclusive explanations of this situation are the major social and cultural differences which have been detected among the population of both of the countries.

Furthermore, no significant difference was found between women and men and white-collar offenders in terms of the way of taking risk. It can be said that incidentally and to the point, *offenders tend more to take risk than men and women*. We have demonstrated that the higher is the level a white-collar crime perpetration risk-aversion; the lower would be the score of personality trait of Extroversion in his behavior, and vice versa. Autonomously, it was found that women are similar to men (both from control groups – non-offenders) in the trait of *Neuroticism*, and women are similar to men in level of risk they are willing to take upon themselves.

*The less society is developed, the more paternalistic it is, and as a consequence, a woman will not be admitted to white-collar jobs*. But from the moment, she will succeed; her chances to commit a white-collar crime are potentially equal. We have found that non-criminal women are similar to white-collar criminals in two significant psychological traits of *Extroversion* and *Conscientiousness*. More than it, we have demonstrated that women who have committed white-collar crime differ significantly in comparison with women who have committed ordinary crimes, especially, it is established that they possess high level of *Agreeableness*, *Consciousness* and *Extroversion* – the indispensable characteristic features without which it is impossible to succeed in white-collar crime perpetration. Additionally, according to our findings, it can be explained by the fact that such women possess high social status, academic education, financial stability and vast social experience and, in such a manner, they profit great social respect and veneration.

We consider that in white-collar crimes perpetration female offenders possess practically the same potentiality to commit a crime as well as male white-collar offenders. We believe that such fact can be explained by a single cause: *white-collar crimes do not need a special physical training and force, which are imposed to be inseparable in the cases of blue-collar crimes where male offenders prevail. The essence of white-collar crimes is expressed in fraudulent behavior (deception, guile and abuse of trust) and absolutely there is no need to resort to force* – the key postulation of any white-collar crime.

We are examining *risk-taking* and *risk-aversion* as two basic components of *intuitive decision* which are admitted in the realm of white-collar crime perpetrating. We have demonstrated that *white-collar male and female offenders are more risk-taking than non-criminal men and women*. Especially, Israeli and Moldavian groups of white-collar offenders who took part in the questionnaire possess higher level of risk-taking for perpetration of white-collar crime than the populations from control groups.

Israeli white-collar offenders tend to take higher risks in comparison with Moldavian white-collar offenders. Moldavian theft offenders, as a control group, are more risky in their decisions than Moldavian white-collar offenders. At the same time, Moldavian non-offenders control group express higher risk-taking in decision-making process than Israeli non-offenders group. Additionally, it was found that there is a significant correlation in white-collar criminals between the personality trait of *Extroversion* and between tendencies for risk-taking. Our finding is supported and is confirmed by a scientific postulation that *Impulsiveness* and *Sociability* characteristics to the extrovert, are almost intuitively related to offences of fraud and deceit.

According to our findings we have demonstrated that there is a correlation between the personality trait of *Extroversion* and between the components of risk-taking in white-collar criminals. As a result, if the score of *Extroversion* will be lower, consequently, the score of risk-taking in white-collar crime perpetrating will be

also lower (decrease) and vice versa. *Impulsiveness* does not refer to spontaneity, instead it refers to the inability to control cravings or urges. Therefore, a person who scores high in *Neuroticism* would be more likely to engage in addictive behaviors. If risk-taking is defined by risky health behaviors, then high *Neuroticism* should predict risk-taking. *Agreeableness* is predicted to be inversely associated with risk-taking [17, p.6]. Low *Conscientiousness* will be associated with risk-taking.

Domain-specific risk behavior means that *risk-taking* may be influenced by situational factors (e.g. perceived risk, framing) rather than personality. For example, people may be more inclined to take risks in the work domain than in the health domain. However if risk-taking in general is associated with a particular personality profile, then people with this personality type will be consistent in their risk-taking across all domains. High scores on *Extraversion* and *Openness* predicted risk-taking in the work domain. *Conscientiousness* predicted risk-aversion. Taken as a whole, *Extraversion* and *Openness* predicted risk-taking while *Conscientiousness* predicted risk-aversion. These findings of risk-taking and risk-aversion consistency support the idea of an association between personality and risk-taking.

There have been proposed four options of reasonability of the perpetration of potential crime such as the following:

- 1) Apprehension (deterrence). In the realm of this survey we have found that before the perpetrating of white-collar crime, women think much more than men;
- 2) Disgrace after the fact of crime perpetrating;
- 3) Severity of punishment;
- 4) Negligent thinking such as "*it will not happen to me*".

We have found that 56% of white-collar criminals do not think about some consequences except for the perpetration of an offence as "*I will not be caught; it would not happen to me*". At the same time, 17% of the white-collar criminals think that fear of being in custody constitutes an element of deterrence. More than it, the subject of severity of punishment does not constitute a deter factor as well as the "disgrace" reason. The top fact is that the severity of punishment is not perceived as deterring the perpetration of a crime when just about 5% of all the populations indicate that it constitutes a factor prior to perpetration of a crime.

About 64% of the sectorized populations consider that the offender does not think that he would be apprehended, meaning, that there is no deterrence and the impulse to perpetrate an offence with an addition of a component of seizing of opportunities constitute a catalyst for perpetration of an offence. In criminals, the variance in this consideration has been by 20% lower as compared to men and women. It should be noticed that about 50% of the population have addressed this fact, and it stems from the fact that each respondent could have marked more than one answer.

Taking into consideration all-above mentioned *risk can be defined not only like a probability of losses but also as a threat of unpredictable development of events. Being linked to human expectations and being often used as a synonym of probability of a loss or of a danger, risk indicates a potential negative effect on an advantage that may derive from given processes in progress or given future events.*

From a criminological perspective, concerning to white-collar crimes *risk* implies some level of knowledge that allows more precise measurement and assessment of the vulnerability of organizations to white-collar crime.

If the critical thinking is the key standpoint of the *Rational Choice Theory*, than intuition is considered to be the core of irrational decisions and, consequently, of *Irrational Theory* which explain the decision-making process in white-collar crimes perpetrating. Therefore, we presume that there isn't any pure rational decision model and that the study of decision and human judgment is characterized in the tension between the rational model that is in the basis of economy and management theory and between psychological considerations that occasionally are not compatible with the principles of rational decision. As a result, we consider that not all crimes can be categorized as a manifestation of rational behavior.

From distribution of answers to the question of which option a white-collar offender thinks of prior to the perpetration of an offence, it appears that on the subject of rational decision-making or an impulse to perpetrate a white-collar crime:

a) It was found on a level of 75% that the persons who took part in the survey are unanimous concerning the idea that a manager who thinks of perpetration of a white-collar crime at his workplace, would do so as a result of his impulse to use the opportunity and to make money by perpetrating the offence.

b) Only 25% of respondents maintain that a manager would perpetrate an offence at his workplace, after he has analyzed rationally the meaning of perpetration of the offence and considered all the implications and outcomes;

c) The absolute majority the respondents are considering that during the perpetrating an offence the manager is appreciating his criminal activity in function of the amount of assets illegally gained on his workplace. In such a manner, a manager who has accumulated assets during his life is considering that a white-collar crime wasn't perpetrated if the total amount of the illegal gain does not exceed the level of 20%. This fact was found in the highest rate amongst women (82%) and amongst men and criminals by 71% and 67% correspondingly. It was found that for a third of the offenders, the amount of accumulated assets is irrelevant (amongst men – 29%, women – only 18%);

d) 30-40% of respondents consider that the reason for perpetration of a white-collar offence stems from the satisfaction a criminal would have from the financial gain as a result of the perpetration of the offence and the "appetite would continue to grow".

e) The respondents both from Israel and Moldova control groups of non-offenders believe that the decision to perpetrate a white-collar crime is an irrational one, which means that it is based on intuition rather than on rational choice. In this case, intuition is based on the social experience accumulated during the life of a concrete person.

f) The amount of assets that white-collar offenders have accumulated during their life was found as the crucial criterion for decision-making in the case of a white-collar crime perpetrating.

g) We assume that the differences in the research results between Moldavian and Israeli populations have two explanations: difference in culture and economical situation and differences in personality traits. Especially, the score of risk-averting in Moldavian control group of non-offenders corresponds directly depends on the higher level of *Consciousness* and score of *Openness*.

h) There have been solved a scientific problem, through the creation of new ways and methods for creation of new results by identifying and demonstrating the connection between intuitive decision determined by the personal traits of the offender, from one side, and perpetrating of the white-collar crime, from another side.

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