

THE ERGONOMIC ELEMENTS ON INVESTIGATING THE ECONOMIC-FINANCIAL FRAUDS

Mihai Adrian BUCUR

The Police Inspectorate of Sibiu County, Romania
bucur_m@yahoo.com

Abstract: The paper addresses an analysis of “natural environment” factors, mentioned in the literature, which could also be considered when investigating the economic-financial frauds, in order to ensure an optimal environment. The role of the specific (toned against the disturbing) factors in ensuring the optimal qualitative conditions for the spaces designed and established for the investigation activities undertaken by the workers of the operational structures of the General Inspectorate of the Romanian Police (I.G.P.R.) is emphasized in this paper.

Keywords: ergonomics, economic and financial fraud, investigation, „natural environment” factors, work stress, tonifying and disturbing factors.

1. INTRODUCTION

This paper contains the results of a research carried out on the effects of stress factors on operative workers.

Every activity carried out at a specific job addresses the existence of a minimum level of comfort, which must be satisfied in order to have at least the minimum optimal conditions imposed.

In this context, figure no. 1 shows a systematization of factors "of the natural environment", which must be taken into account for the spaces designed and organized, for the work departments where operative workers perform the investigation.

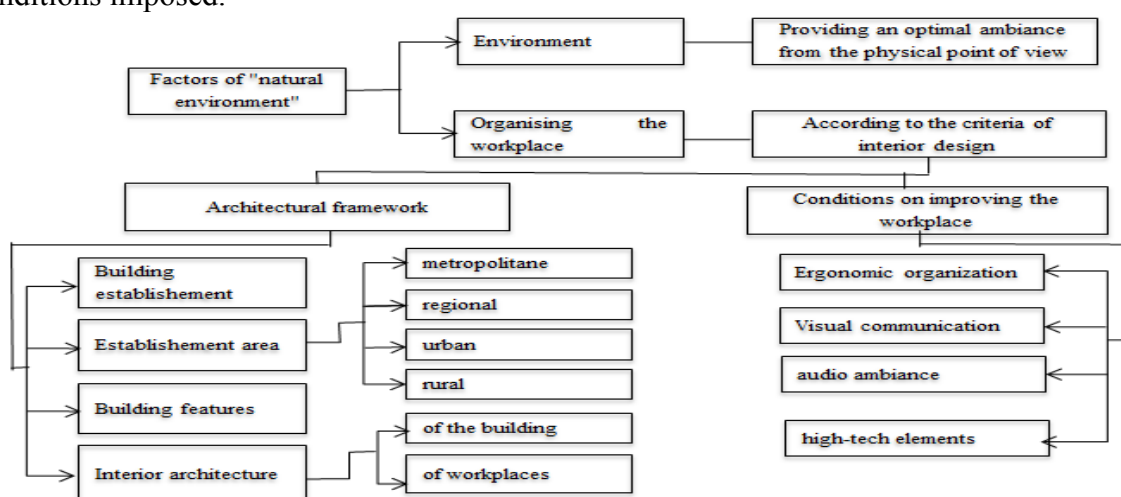


Figure no. 1: Systematization of factors "of the natural environment" (adaptation of criteria related to land-use planning mode)

The economic-financial fraud investigation activity determines the human's power consumption, which is influenced by a number of material and psycho-social factors.

The above-mentioned factors condition one another and their analysis leads to significant conclusions.

The application of these criteria (which form the basis of a systematic study) will ensure that the conditions of the physical environment for the spaces intended for fraud investigation activity are provided.

2. Aspects of the workplace

When creating an ambiance, certain factors "of the natural environment", which have the purpose to ensure that workers are provided with optimal working conditions, are required to be present.

In this regard the measures needed to be taken in order to minimize the effects of disruptive factors (stress agents) for workers, operatives and the environmental factors have an important role.

This paper presents an analysis of the two criteria listed: architectural framework; conditions of employment planning.

2.1. Architectural framework

In terms of the architecture of the place of work, this criterion takes into account certain architectural features of buildings in terms of their location, character and specific architectural interiors.

An analysis of this criterion concerning the investigation shows that certain spaces made available for carrying out this work (investigation) are some buildings (which originally had another destination) that do not satisfy certain aesthetic and functional conditions specific to architectural requirements (regarding the layout of workplaces, the color of architectural surfaces or spaces designed for that purpose).

In this context, such an activity (investigation) requires "a minimum of comfort" for those involved, demanding the

decision makers to provide the minimal optimal conditions for employees.

2.2. Conditions of employment planning

This criterion addresses three main aspects:

- the ergonomic organization of workplaces;
- the conditions for visual communication;
- the appropriate audio ambiance.

Applying these conditions in the fraud investigation is a significant undertaking, which should lead to achieving the necessary ambiance for the operative workers, because each of these conditions has a specific role and significance in this activity.

2.2.1. The ergonomic organization of workplaces for the investigation

To ensure the proper ergonomic organization, there should be considered all the issues and problems related to:

- providing the appropriate facilities for work (travel, record-playback equipment, furniture, computers, etc.);
- equipping human resources (operative workers) with adequate clothing for defense against some forms of violent manifestation of suspects.

All ambient factors (toned and disturbing) shown in figure no. 2, whose presence causes positive and negative influences on operative workers involved in the fraud investigation, are an important role in organizing ergonomically the workspaces.

2.2.2. Visual communication conditions

Visual communication is one of the elements contributing to the ambiance, and thus the following aspects must be considered:

- the lighting of workspaces: natural and artificial, general and local;
- environmental effects and colors correlated with all functional elements: architecture-related, occupational-safety related, investigation-process related, the labor-movement related and so on.

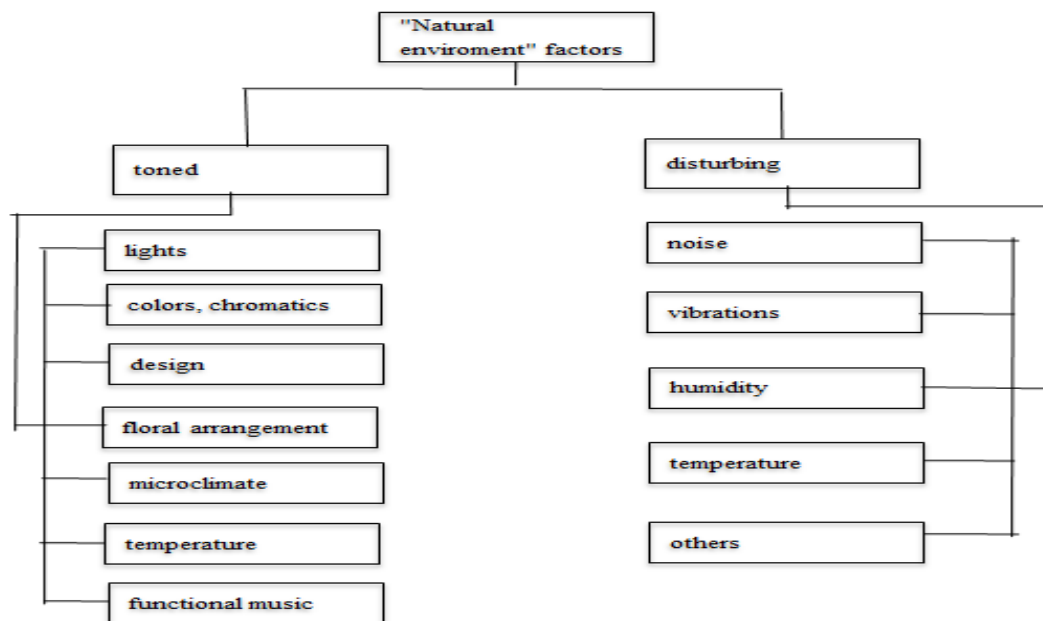


Figure no. 2 – Factors involved in organizing ergonomically the workplace.

2.2.3. The appropriate sound ambiance

It plays an important role in achieving an ambiance appropriate for conducting the fraud investigation, based on certain specific arrangements concerning:

- playing a general (or individual) background music for special spaces where it is appropriate;
- achieving an optimal physical environment (i.e. sound proofing to noise above a certain level);
- cutting or reducing the source of noise.

Note that, to ensure optimal environments, the sector of aesthetics and artistic creation elements should also be considered.

3. Influence of stress at work

Fraud investigation work is often influenced by certain categories of stress factors that determine obvious states of stress on the operative workers, states reflected in the quality of relationships among team members. These factors affect the health and performance of operative workers. Studies in the field group work-related stressors in two large categories:

- objective ones – that can be quantified;
- subjective ones – difficult to be quantified.

There is a connection of causality between the elements of ergonomics which ensure the workplace environment and the

(objective and subjective) stress factors that sometimes interrelate.

In fact, "stress agents" play an important (negative) role in providing an atmosphere favorable to the effective conduct of fraud investigation.

In order to better define the role of stressors, the paper presents a survey conducted on some respondents from institutions in the field of economic-financial fraud investigation, thus settling some objectives and hypotheses.

4. Operating the survey

4.1. Processing and assessing the information acquired

The survey has 26 questions and gives the possibility for the respondents to express their own opinions openly, in accordance with the nature of the questions.

There were approximately 75 respondents from the institutions having the responsibility to discover, prevent, fight against and to solve the economic-financial fraud. The respondents were randomly selected (operative and auxiliary personnel, attorneys, managers) and the results after processing the responses were obtained for 50 valid respondents' answers.

4.2. Assessing the respondents' opinions

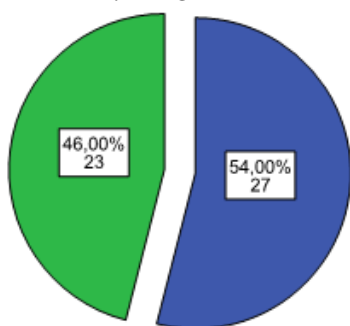
Grouping the questions of the survey should take into consideration:

- the aspects generated by stress and the causes determining it are provided in the table no. 1 and figure no. 3;
- the assessments on workload and time are provided in the table no. 2 and figure no. 4;
- the assessments on the nature of interpersonal relationships and their quality, as well as on the quality of the communication process among the employees, are provided in the table no. 3 and figure no. 5;
- the assessment on adapting the operative structure and organizing the activity are provided in the table no. 4 and figure no. 6.

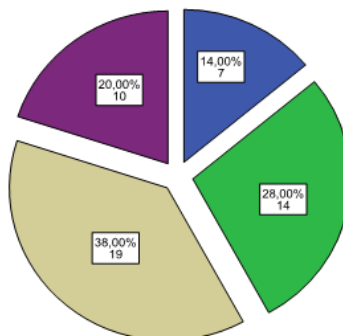
Table no. 1

No.	Question no. / type survey	Addressing the question	Assessment scale %				
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree
0	1	2	3	4	5	6	7
1	1/B	You are a person	unaffected by stress 54,00		affected by stress 46,00		
2	4/B	When do you feel more stressed	In the morning between 6 – 10 14,00	In the morning between 10 – 14; 28,00	At noon (14 ⁰⁰ - 16 ⁰⁰) 38,00	In the evening (between 18 ⁰⁰ - 22 ⁰⁰) 20,00	
3	5/B	The most “daily stressful” mood is caused by:	the great amount of daily tasks; 8,0	the insufficient budget of time/task 42,00	meeting with the partners 32	the inadequate planning of performance 12	High volume of managerial tasks 6

Survey B. Question no. 1



Survey B. Question no. 4



Survey B. Question no. 5

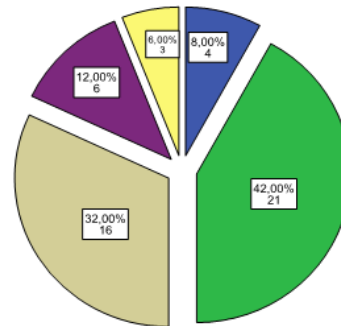


Figure no.3: Graphical representation of the responses to the questions 1, 4 and 5

Table no. 2

No.	Question no. / type survey	Addressing the question	Assessment scale				
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree
0	1	2	3	4	5	6	7
1	2/B	The weekly workload is:	Less than 40 hours 18,00	between 41 - 50 hours 52,00		over 51 hours, 30,00	
2	3/B	The budget time is :	sometimes not enough 6,0	permanently not enough 38,0	sometimes enough; 48,0	permanently enough, not being in the situation when they cannot solve their own tasks on time. 8,0	

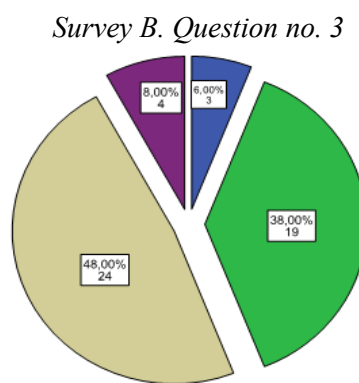
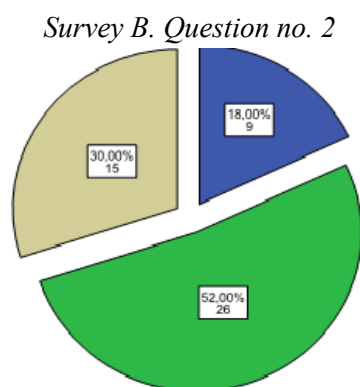


Figure no. 4: Graphical representation of the responses to the questions 2 and 3

Table no. 3

No.	Question no. / type survey	Addressing the question	Assessment scale %				
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree
0	1	2	3	4	5	6	7
1	6/B	How much do the interpersonal relationships among employees influence the professional activity within the organization?	10,00	46,00	38,00	4,00	2,00
2	7/B	How much does the quality of the interpersonal relationships between employees (or teams) can influence the quality of organizational environment?	6,00	34,00	46,00	10,00	4,00
3	10/B	How much does the quality of the communication processes can be improved within the organization?	6,00	18,00	30,00	38,00	8,00

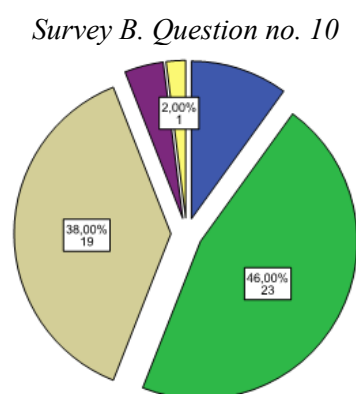
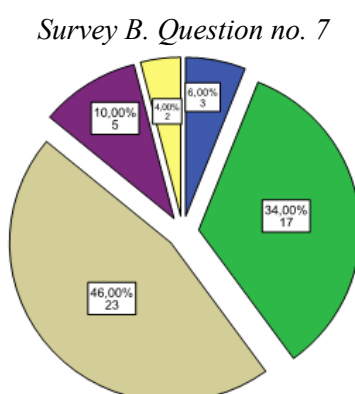
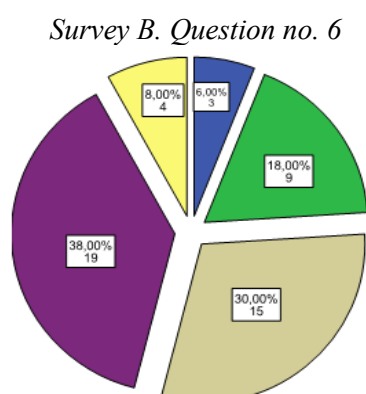


Figure no. 5: – Graphical representation of the responses to the questions 6, 7 and 10

Table no. 4

No.	Question no. / type survey	Addressing the question	Assessment scale %				
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree
0	1	2	3	4	5	6	7
1	8/B	How much does the adaptation of the operative structure to specific tasks impose a condition to the completion of tasks?	8,00	26,00	32,00	20,00	14,00
2	9/B	Organizing the activity can influence the performance of the operative structure?	8,0	20,0	34,0	16,0	22,0

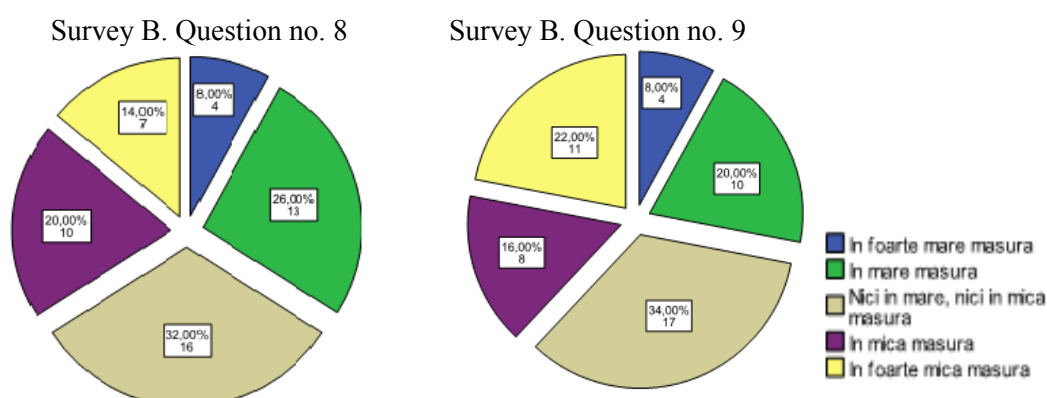


Figure no. 6: Graphical representation of the responses to the questions 8 and 9

5. Conclusions

The research carried out on all the factors of "the natural environment" highlights the influence they have on both the operative efficiency of workers and on ensuring a favorable environment for them.

Concerning the operational survey, in Tables no 1, 2, 3 and 4 the respondents' assessments for the 10 questions of the

questionnaire are shown, and in Figures 3, 4, 5 and 6 the responses regarding the level of appreciation and how the respondents are influenced by the stress generated by the workload are plotted, as well as the interpersonal relationships, communication and work organization, all of these being specific to the activity of the economic-financial fraud investigation.

References

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