

# We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900

Open access books available

186,000

International authors and editors

200M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index  
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?  
Contact [book.department@intechopen.com](mailto:book.department@intechopen.com)

Numbers displayed above are based on latest data collected.  
For more information visit [www.intechopen.com](http://www.intechopen.com)



---

# Corrections of Research Instrument

---

Pranas Žukauskas, Jolita Vveinhardt and  
Regina Andriukaitienė

Additional information is available at the end of the chapter

<http://dx.doi.org/10.5772/intechopen.70632>

---

## Abstract

The stages of formation of the research instrument and the corrections carried out after the expert evaluation, and the exploratory research are described. The purified research instrument consisting of two parts is presented. The part of the management culture of the questionnaire consists of four scales (culture of managerial staff, culture of organization of the management processes, management culture of working conditions, and culture of the documentation system); the part of the social responsibility of the questionnaire consists of two scales (behavior of the socially responsible organization and behavior of the socially responsible employee). At the start, the provision that the management culture and social responsibility are universal categories, including organizations in terms of size and classification of economic activities, is reasoned. The principles of evaluation of the level of management culture are introduced.

**Keywords:** corporate social responsibility, level of management culture, research instrument, model, employees, organization

---

## 1. Introduction

### 1.1. Relevance of the research

The main thing for research is to choose the best way to achieve the formulated aim and consider the mistakes which appeared because of some reasons and must be corrected. In this case, systematic and critical approach to the evaluation of all steps of the research is important. In social research, in planning questionnaire research, the explanatory limitations must be recognized, the aims must be linked directly to the measures, other methods should be considered as checks, and, most importantly, professional advice should be sought during the planning [1]. In addition, it is natural that after a series of check procedures the final research instrument may be changed quite significantly [2]. Therefore, after the expert assessment of the developed research questionnaire and having checked psychometric characteristics of the

---

questionnaire during the exploratory research, the next step requires the analysis of knowledge obtained, which would allow developing a reliable questionnaire for determination of the level of development of management culture in order to implement corporate social responsibility. In the case of our research, the changes are not notably significant.

### 1.2. Problem of the research

The problem of the research is raised by the question: How to prepare a questionnaire for the main research based on the results of the expert evaluation and the exploratory research?

### 1.3. Object of the research

The object of the research is correction of the research instrument.

### 1.4. Purpose of the research

**The purpose of the research** is to prepare the final version of the questionnaire after correction of the research instrument for the main research.

### 1.5. Objectives of the research

The **objectives of the research** are (1) to examine the results of the expert assessment and the exploratory research and (2) to revise and prepare the questionnaire for conducting the main research.

### 1.6. Methods of the research

After the expert assessment and exploratory research, the results were examined and compared. On the basis of the results, the adjustment of the questionnaire was carried out.

## 2. The results of the expert assessment and the exploratory research

When forming the instrument, two provisions were followed. First, management culture and social responsibility: universal categories, without distinction of organizations by sector and/or economic activity classification, size, and so on. That means that the work with people is organized in accordance with the humanistic attitude. Second, the provision is defined saying that the object of the research is *management culture* and *corporate social responsibility* part in case of this research is a context. Using a research instrument and having set management culture development level, it is intended to diagnose the organization's readiness to become socially responsible. The resulting data will provide the basis for modeling the management culture changes aiming for corporate social responsibility.

*Management culture* part in the questionnaire consists of four scales: management staff culture, culture of organization of managerial processes, management working conditions culture, and documentation system culture. *Social responsibility* part in the questionnaire consists of two scales: behavior of a socially responsible organization and behavior of a socially responsible

First part: Management culture	MC*	Second part: Corporate social responsibility	CSR*
Scales	MCs**	Scales	CSRs**
1. Management staff culture	MSC	1. Behavior of a socially responsible organization	BSRO
2. Managerial processes organization culture	COMP	2. Behavior of a socially responsible employee	BSRE
3. Management working conditions culture	MWCC		
4. Documentation system culture	DSC		
Total	4 scales	Total:	2 scales
		Total amount of scales:	6 scales

Source: Compiled by the authors.

\*Management culture in tables and diagrams is marked by code MC; social responsibility is marked by code CSR.

\*\*Management culture scales are marked MCs; corporate social responsibility scales are marked CSRs.

**Table 1.** Questionnaire structure: Parts and scales.

employee. **Table 1** presents the first instrument-making phase, during which the management culture and social responsibility parts were assigned the scales and codes.

Each *management culture* part scale consists of four subscales (total 16 subscales), in the broad sense oriented towards leadership competencies, processes organization competence, the working environment formation, management of organization's documents. *Social responsibility* scale consists of 10 subscales involving the relationship with the organization's external environment, relationships with employees, psycho-emotional responses of the members of the organization to managerial actions, assessments, and managerial anomalies. Management culture subscales are distributed evenly; the number of social responsibility subscales in the scales is not identical.

**Table 2** lists the sequential distribution of the scales belonging to the parts and subscales assigned to the scales in order of precedence.

Having done the analysis of the expert assessment and exploratory research results, three subscales of corporate social responsibility part were transformed by combining them in two. Market responsibility subscale was conditionally divided into two subscales: services and their quality; consumer information, health, and security. It was found that it was unreasonable to have such a detailed presentation and analyze individually (**Figure 1**).

Before the expert assessment and the exploratory research, the scale of behavior of socially responsible employee was sectioned off not into six (as it is now), but into the eight, subscales. Having analyzed and expert assessment and exploratory research results, it was decided to leave the six subscales, not abandoning the rest (in the results of exploratory research there are presented already corrected subscales). **Figure 2** visualizes the transformation of four subscales into two subscales.

Having combined social responsibility part subscales, it was inevitably necessary to give up statements that were identified as surplus after the expert assessment and exploratory research

Parts	Scales		Subscales	
	MCs		MCss	
Management culture (MC)	Management staff culture	MSCs	Management staff general culture level	MSC1
			Management science knowledge level	MSC2
			Managers’ personal and professional characteristics	MSC3
			The level of the ability to manage	MSC4
	Managerial processes organization culture	COMPs	Optimal managerial processes regulation	COMP1
			Rational organization of management work	COMP2
			Modern computerization level of managerial processes	COMP3
			Culture of visitors’ reception, conducting meetings, phone calls	COMP4
	Management working conditions culture	MWCCs	Working environment level (interior, lighting, temperature, cleanness, etc.)	MWCC1
			Level of organizing working places	MWCC2
			Work and rest regime, relaxation options	MWCC3
			Work security, sociopsychological microclimate	MWCC4
	Documentation system culture	DSCs	Culture of official registration of documentation	DSC1
			Optimal document search and access system	DSC2
			Rational use of modern information technologies	DSC3
			Rational storage system of archival documents	DSC4
CSRs		CSRss		
Corporate social responsibility (CSR)	Behavior of a socially responsible organization	BSROs	Market responsibility (services and their quality)	BSRO1
			Market responsibility (consumer information, health and safety)	BSRO2
			Environment protection responsibility	BSRO3
			Responsibility in relations with employees	BSRO4
			Responsibility in relations with society	BSRO5
	Behavior of a socially responsible employee	BSREs	Intentions to leave work	BSRE1
			Uncertainty and lack of information at work	BSRE2
			General physical and psychological condition of the employee	BSRE3
			The employee’s opinion about the organization	BSRE4
			Corruption, nepotism, favoritism	BSRE5
			Social responsibility, criticism, staff attitude	BSRE6

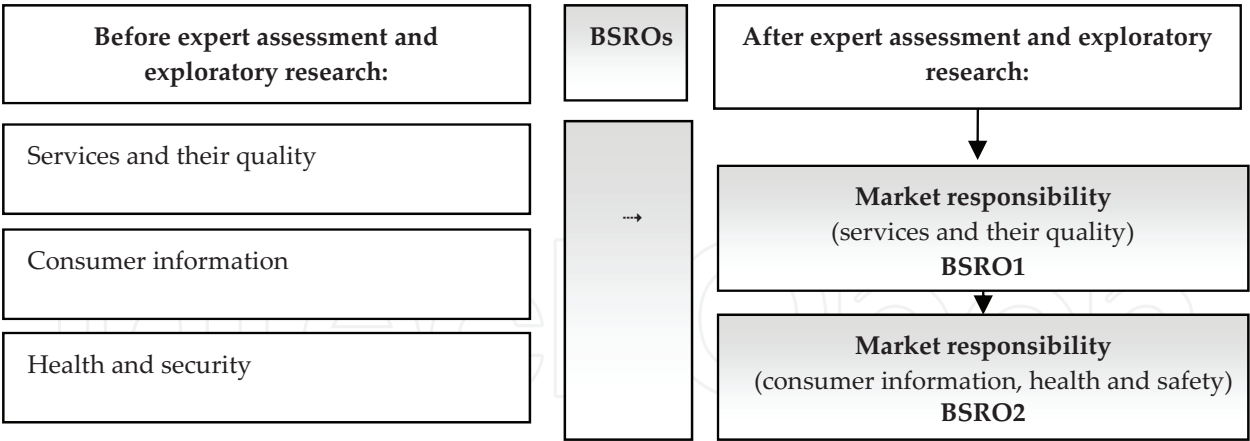
Source: Compiled by the authors.

\*Management culture subscales are marked MCss; corporate social responsibility scales are marked CSRss.

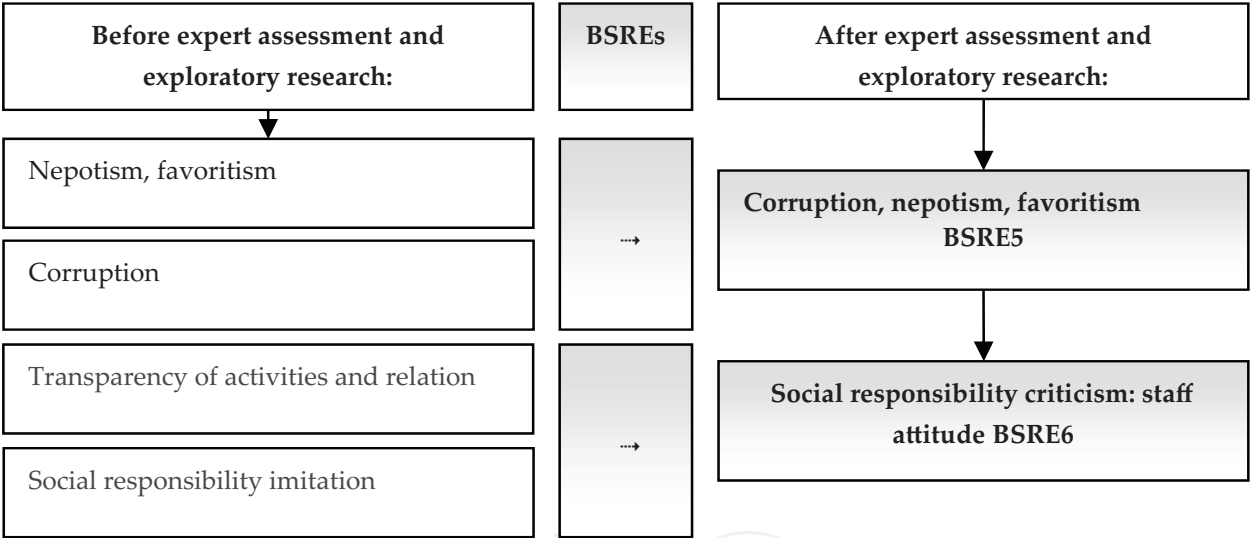
Table 2. Questionnaire structure: Parts, scales, and subscales.

results analysis, but when the subscales merged into larger subscales according to the theme, the number of statements rose to 10 in one or another case. Thus, the corporate social responsibility part subscales and the unevenness of statements with respect to the management culture part are the outcomes of expert assessment and analysis of the results of the exploratory research.

Table 3 indicates the length of the subscale by the test steps, that is, how many statements a specific subscale consists of. Management culture subscales in this part of the instrument comprise 104 statements (MCi 104). Corporate social responsibility subscale includes 73 statements (CSRi 73). The minimal number of statements in the subscale is 5. Throughout the questionnaire, there are six 5-step test length subscales. The maximal number of the statements in the subscale is 9–11. There are five subscales of such a length in the questionnaire. When the



**Figure 1.** Scale of behavior of socially responsible organization: changes of subscales structure. *Source:* Compiled by the authors. *Note:* \*BSROs code is used to mark the scale of behavior of socially responsible organization of corporate social responsibility part.



**Figure 2.** Scale of behavior of a socially responsible employee: changes of the subscales' structure. *Source:* Compiled by the authors. *Note:* \*BSREs code is used to mark the scale of behavior of socially responsible employee of corporate social responsibility part.

number of test steps in the subscale is too high, the Cronbach alpha coefficient is always quite high, so, as it has already been mentioned in the presentation of the results of the exploratory research, it is necessary to calculate the Spearman Brown (hypersensitivity) ratio. In this case, the optimal number of statements was foreseen in the subscale. As can be seen, the number of statements in the subscales is spread fairly evenly. The average of management culture part statements in the subscale is 26 (min = MCi 24, max = MCi 28 statements). Two scales forming corporate social responsibility part include 31 (=CSRi 31) and 42 (=CSRi 42) statements. Analyzing the volume of scales and subscales with respect to the parts, their unevenness is based on the fact that social responsibility part inevitably had to include two most important scales of socially responsible behavior: the employee and the organization.



Parts	Scales	Subscales	Groups of statements by subscales	
MC	MCs	MCss	MCi	
	MSCs	MSC1	MSC1.1 – MSC1.7	= MCi28
		MSC2	MSC2.8 – MSC2.12	
		MSC3	MSC3.13 – MSC3.19	
		MSC4	MSC4.20 – MSC4.28	
	COMPs	COMP1	COMP1.29 – COMP1.35	= MCi24
		COMP2	COMP2.36 – COMP2.40	
		COMP3	COMP3.41 – COMP3.45	
		COMP4	COMP4.46 – COMP4.52	
	MWCCs	MWCC1	MWCC1.53 – MWCC1.61	= MCi27
		MWCC2	MWCC2.62 – MWCC2.67	
		MWCC3	MWCC3.68 – MWCC3.73	
		MWCC4	MWCC4.74 – MWCC4.79	
	DSCs	DSC1	DSC1.80 – DSC1.85	= MCi25
		DSC2	DSC2.86 – DSC2.90	
		DSC3	DSC3.91 – DSC3.98	
		DSC4	DSC4.98 – DSC4.104	
CSR	CSRs	CSRss	CSRi	
	BSROs	BSRO1	BSRO1.105 – BSRO1.110	= CSRi31
		BSRO2	BSRO2.111 – BSRO2.115	
		BSRO3	BSRO3.116 – BSRO3.122	
	BSREs	BSRO4	BSRO4.123 – BSRO4.129	= CSRi73
		BSRO5	BSRO5.130 – BSRO5.135	
		BSRE1	BSRE1.136 – BSRE1.141	
		BSRE2	BSRE2.142 – BSRE2.147	
		BSRE3	BSRE3.148 – BSRE3.152	
		BSRE4	BSRE4.153 – BSRE4.157	
		BSRE5	BSRE5.158 – BSRE5.167	
		BSRE6	BSRE6.168 – BSRE6.177	

Source: compiled by the authors.

**Table 3.** Questionnaire structure: Balance of parts, scales, subscales, and statements range. Note: \*MCi - management culture part statements; \*\*CSRi - corporate social responsibility part statements.

In management culture part, all scales statements were formulated positively, with the exception of nine statements through all scales and subscales in order to ensure the honesty of the respondents completing the questionnaire.

*In the scale of management staff culture* in the management science knowledge subscale, one statement was formulated negatively (“In my workplace, one can become a manager without managerial education”); in the managers’ personal and professional characteristics subscale, two negative statements were formulated (“Managers have unhealthy competition with subordinates” and “Managers have unhealthy competition with heads of other units at our organization”).

*In the scale of Managerial processes organization culture* in the optimal managerial processes regulation subscale, one statement is negative (in the questionnaire marked by number 35

“In my workplace, in terms of managers, “the left hand does not know what the right hand is doing”); in the modern computerization of managerial processes subscale, there is also one negative statement (number 45 in the questionnaire “In my organization, there is lack of computers and software”); in the culture of visitors’ reception, conducting meetings, phone calls subscale, two negative statements were formulated (number 48 in the questionnaire “Interaction with partners is especially businesslike” and number 51 in the questionnaire “Answers to the claims from the outside are considered as unpleasant obligation”).

*In the scale of management working conditions’ culture* in the organizing working places subscale, one negative statement was formed (in the questionnaire marked by number 67 “Employees sometimes have to take care of the working tools themselves for their money”).

*In the scale of documentation system culture* in the rational storage system of archival documents subscale, one negative statement was formed (number 103 in the questionnaire “Sometimes finding previously created documents takes a long time”).

In the corporate social responsibility part in the “Behavior of socially responsible employee” scale, all the statements were formed negatively, with the exception of two positive statements (number 136 “With people outside the organization I always speak only positively about the workplace” and 137 “While communicating with strangers, I always talk about my workplace as a reliable one”) **Table 4.**

At the stage of management culture determination, the following questions are asked: What should the level of management culture development be in order to implement corporate social responsibility? Are the organizations participating in the research ready to become socially responsible? If the organizations are not ready to become socially responsible or corporate social responsibility is not accepted by values, they will only be able to simulate socially responsible activities, but it will not become an organic part of the management culture. In this case, naturally there should be lack of consistency in actions and forcefulness with respect of both the staff and the public (customers, partners, communities). This type of simulation can enhance the employee dissatisfaction and internal conflict.

Management culture development level is determined by using a Likert [3] scale. According to Likert, scale 1 and 2 points indicate a very low and low level of management culture, 3 points indicate medium level, and 4 and 5 points indicate high and very high management culture development level in the organization (**Table 5**). Organizations with a high and very high management culture are ready to become socially responsible organizations. These organizations can only maintain this level of culture which exists at the moment and develop it further. The medium-level management culture organizations are proposed management culture-level determination, in order to implement corporate social responsibility, managerial decisions model (presented in 6 part of the monograph), helping to strengthen the culture, establishing its problematic fields, and solving specific tasks. Organizations having very low and low management culture development level are proposed to review and reshape the management culture, because in this case, there will be too many changes, and they can cause even more confusion to the already misbalanced or unbalanced management culture.



Groups of statements by subscales	→ Subscales	Number of statements in a subscale
<b>Management staff culture (MSC)</b>		
MSC1.1–MSC1.7	→ Management staff general culture level	7
MSC2.8–MSC2.12	→ Management science knowledge level	5 (including 1 negative statement, No 11 in the questionnaire)
MSC3.13–MSC3.19	→ Managers' personal and professional characteristics	7 (including 2 negative statements, No 18 and 19 in the questionnaire)
MSC4.20–MSC4.28	→ The level of the ability to manage	9
Total:		28
<b>Managerial processes organization culture COMP</b>		
COMP1.29–COMP1.35	→ Optimal managerial processes regulation	7 (including 1 negative statement, No 35 in the questionnaire)
COMP2.36–COMP2.40	→ Rational organization of management work	5
COMP3.41–COMP3.45	→ Modern computerization level of managerial processes	5 (including 1 negative statement, No 45 in the questionnaire)
COMP4.46–COMP4.52	→ Culture of visitors' reception, conducting meetings, phone calls	7 (including 2 negative statements, No 48 and 51 in the questionnaire)
Total:		24
<b>Management working conditions culture (MWCC)</b>		
MWCC1.53–MWCC1.61	→ Working environment level (interior, lighting, temperature, cleanness, etc.)	9
MWCC2.62–MWCC2.67	→ Level of organizing working places	6 (including 1 negative statement, No 67 in the questionnaire)
MWCC3.68–MWCC3.73	→ Work and rest regime, relaxation options	6
MWCC4.74–MWCC4.79	→ Work security, sociopsychological microclimate	6
Total:		27
<b>Documentation system culture (DSC)</b>		
DSC1.80–DSC1.85	→ Culture of official registration of documentation	6
DSC2.86–DSC2.90	→ Optimal document search and access system	5
DSC3.91–DSC3.98	→ Rational use of modern information technologies	8
DSC4.98–DSC4.104	→ Rational storage system of archival documents	6 (including 1 negative statement, No 103 in the questionnaire)
Total:		25
<b>Behavior of a socially responsible organization (BSRO)</b>		
BSRO1.105–BSRO1.110	→ Market responsibility	6
BSRO2.111–BSRO1.115	→ Market responsibility	5
BSRO3.116–BSRO3.122	→ Environment protection responsibility	7

Groups of statements by subscales	→ Subscales	Number of statements in a subscale
BSRO4.123–BSRO4.129	→ Responsibility in relations with employees	7
BSRO5.130–BSRO5.135	→ Responsibility in relations with society	6
		Total: 31
<b>Behavior of a socially responsible employee (BSRE)*</b>		
BSRE1.136 – BSRE1.141	→ Intentions to leave work	6 (including 2 positive statements, No 136 and 137 in the questionnaire)
BSRE2.142: BSRE2.147	→ Uncertainty and lack of information at work	6
BSRE3.148 – BSRE3.152	→ General physical and psychological condition of the employee	5
BSRE4.153 – BSRE4.157	→ The employee's opinion about the organization	5
BSRE5.158 – BSRE5.167	→ Corruption, nepotism, favoritism	10
BSRE6.168 – BSRE6.177	→ Social responsibility, criticism, staff attitude	10
		42
		Total: 177

Source: Compiled by the authors.

\*Subscales of behavior of socially responsible employee (all statements formulated negatively, except the ones mentioned in the table).

**Table 4.** Questionnaire structure: Detailed distribution of number of statements.

① Low level		② Medium level	③ High level	
Very low level	Low level	Medium level	High level	Very high level
Strongly disagree	Disagree	Not sure	Agree	Strongly agree
①	②	③	④	⑤

Source: compiled by the authors.

**Table 5.** Management culture: methodology for determining three levels.

**Table 6** shows that the current subscales “Market responsibility (services and their quality)” and “Market responsibility (consumer information, health and safety)” consisted of three subscales before expert evaluation and exploratory study. The drawback of previous subscales that was revealed by analysis of the results is that “Consumer information” subscale included only

Corporate social responsibility (CSR)	CSRs	CSRi	CSRss	CSRss
			WAS	NOW
	Behavior of socially responsible organization (BSROs)	In my workplace, much attention is paid to the quality of services (production)	Services and their quality	<b>Market responsibility</b> (services and their quality) <b>BSRO1</b>
		In my workplace, there are attempts to fulfill the promises made to customers		
		In the organization, the quality of declared services does not differ from reality		
		In my workplace, there is product quality control system		
		Consumer complaints are examined and the conclusions made improve the quality		<b>Market responsibility</b> (consumer information, health and safety) <b>BSRO2</b>
		My workplace in the relationships with clients is guided not only by legislation but also by universally accepted principles of morality		
		I willingly use (would use) services and production provided by my organization		
		My organization is not manipulating the confidence of the consumer		
		The organization provides detailed information about the products	Health and safety	
		My organization, providing services and products takes care of the health of consumers		
		There were no cases when the services (production) provided by my workplace would endanger the consumer welfare		

Source: Compiled by the authors.

**Table 6.** Structural changes of the subscale “market responsibility”.

two statements and “Health and Safety” included three statements. Shaping the instrument’s original version, this was not taken into account. According to the nature of the content of statements, it was decided that all three previously concluded scales can be combined into two.

**Table 7** presents subscales and their statements which, following the expert evaluation and analysis of exploratory research results, were combined into one subscale “Corruption, nepotism, favoritism.”

**Table 8** details the structure of previous subscales “Transparency of activities and relations” and “Simulation of social responsibility” before the connection point. Regardless the fact that

Corporate social responsibility (CSR)	CSRs	CSRI	CSRss	CSRss
			WAS	NOW
	Behavior of socially responsible employee BSREs	<p>The coming of employees to our organization is always subject to the availability of close ties, acquaintances</p> <p>I think over every word when it comes to communicating with colleagues who are relatives or friends of administration</p> <p>The employee will never get a place to which the relative or acquaintance of the head claims</p> <p>In my workplace, the salary or career depends on how managers are sweetened</p> <p>In my workplace, the salary and career are not determined by competence</p> <p>It is better not to argue, quarrel with people close to the manager</p> <p>We can obtain work only through an acquaintance</p> <p>Politicians and political events affect the decision-making in the organization</p> <p>Changes of political leaders, political parties always cause confusion within the organization</p> <p>Political changes influence changes in personalities in the organization</p>	<p>Nepotism, favoritism</p> <p>Corruption</p>	<p><b>Corruption, nepotism, favoritism</b></p>

Source: Compiled by the authors.

**Table 7.** Structural changes of the subscale “corruption, nepotism, favoritism”.

the number of statements in the subscales was sufficient, it was decided to move them to an all-encompassing subscale, calling it “Social responsibility criticism: staff attitude.”

Having formed the diagnostic statements, two blocks of sociodemographic questions were made. In the first block of sociodemographic questions, there were presented four questions after expert evaluate, the aim of which is to obtain information about the organization in which the respondent is employed. While already forming the instrument, it was decided to interview the employees of different types of organizations that is why it is extremely important to distinguish organizations according to their legal status, sector, capital nature, and size. Different organizations were selected to highlight the possible differences and common management-cultural environment trends that affect the manager’s approach to their activities object. The aim of the second block of sociodemographic questions is to define the characteristics of the study participant. For this purpose, there were formed five questions for the identification of responsibilities, the years of service in the target organization, education, age, and sex. In other words, there are distinguished variables in order to determine their relation



with the management culture. The research data aims to be processed at different socio-demographic sections, and to compare the results.

After exploratory research, it was decided to measure management culture development not by three but five levels. Measuring by three levels, the difficulties arose in the interpretation of results (**Figure 3**).

After the second expert evaluation, the interview questions were adjusted. Having done the instrument adjustments and prepared a final version of the questionnaire, the model of management development determination level in order to implement corporate social responsibility was formed.

## Author details

Pranas Žukauskas<sup>1</sup>, Jolita Vveinhardt<sup>1\*</sup> and Regina Andriukaitienė<sup>2,3</sup>

\*Address all correspondence to: [jolita.vveinhardt@gmail.com](mailto:jolita.vveinhardt@gmail.com)

1 Vytautas Magnus University, Lithuania

2 Marijampolė College, Lithuania

3 Lithuanian Sports University, Lithuania

## References

- [1] Kirk-Smith M, McKenna H. Psychological concerns in questionnaire research. *Journal of Research in Nursing*. 1998;**3**(3):203-211. DOI: 10.1177/174498719800300306
- [2] Saris WE, Gallhofer IN. *Design, Evaluation, and Analysis of Questionnaires for Survey Research*. 2nd ed. Wiley-Blackwell; 2014. p. 376
- [3] Likert R. A Technique for the Measurement of Attitudes. *Archives of Psychology*. 1932;**22**(140):5-55



