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# Business Ethics in Transition Countries – Cluster Analysis of Behavior and Attitudes



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# Business Ethics in Transition Countries – Cluster Analysis of Behavior and Attitudes

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**Abstract**

The aim of this article is to obtain a better understanding of people's attitudes toward ethical issues. We explored four ethics issues: (1) attitude on ethical issues in general, (2) information manipulation, (3) environmental issues, and (4) law issues. This study examines variation in attitudes toward ethical issues based on data collected from questionnaire survey. The data set is composed of people who participated in the survey. Although firms were randomly selected to participate in the survey, it is not clear to what extent they apply to the population as a whole; this would be a useful further study. In order to study variation we used cluster analysis that revealed that people could be divided into three clusters, with distinctive demographic, economic and attitudinal traits for each cluster. Results could be useful both to policy makers at the government level, and to managers that are worried that low sensitivity toward ethical issues could influence firm's performance.

**Keywords**

ethics, information manipulation, cluster analysis

**JEL classification**

C10, D23, L22

## **Introduction**

The aim of the present study is to obtain a better understanding of worker's behavior and attitudes with respect to business ethics. It is of particular interest to characterize variation within the population with respect to these traits. Improved knowledge of ethic behavior of different groups of worker's should

For the present study, the question we pose is: can workers be placed into meaningful groups by consideration of variation in a number of economic, demographic and behavioral/attitudinal traits? In other words, the goal of the paper is to examine whether the data can be usefully divided into clusters. We would like to find out if members of the dataset can be classified in limited number of types, with rather similar personal and firm characteristics, together with ethical attitudes and behavior.

## **Theory**

Corporate social responsibility has been conceptualized as a pyramid constituting four kinds of responsibility that must be considered simultaneously: economic, legal, ethnical and philanthropic (Carroll, 2003). Economic responsibilities refer to business's primary function as a producer of goods and services that consumers need and want, while making an acceptable profit. This responsibility is considered to be primary, because without financial availability the other responsibilities become moot issue. In addition to its economic responsibilities, business is expected to carry out its work in accordance with the law and government regulations. The law guiding business practice can be viewed as a fundamental percept of the free enterprise system and as coexisting with economic responsibilities. Obviously, not every societal obligation can be codified into law. Therefore, ethical responsibilities encompass the more general responsibility to do what's right or avoid harm. First step in broadening corporate social responsibility is to create ethnical atmosphere within the corporation.

Before addressing results from this empirical research on business ethic's behavior and attitudes, one must first address the fundamental difference between social responsibility and ethics. Social or corporate responsibility relates the broadening of organizational accountability, particularly in relation to the immediate operating environment; ethics pertains to individual value-guided behavior.

A number of researchers have concluded that there is little consistency in ethical perceptions of different situations; a person cannot be labeled "unethical" in an overall sense; each circumstance should be examined separately. Acceptance of unethical behavior in one situation cannot be used as an indication of likely acceptance of unethical behavior in another, nor can be taken as a measure of overall agreement to unethical behavior. As potentially unethical situations are perceived independently, supervising management should not evaluate or prejudge the overall ethical standards of employees on the basis of isolated incidents.

The administration of questionnaires indicating the level of agreement or disagreement to potentially unethical situations could alert managers to focus attention and investigate controls in certain areas (Drummond, 2004).

## **Data and methodology**

The study makes use of a set of data collected in 2003. The population from whom the data were collected comprised firms in various parts of Croatia, listed on the databases of Croatian firms (Institute for Business Intelligence, 2004). The objective of the survey was to identify different groups of workers in relation to their ethics behavior and attitudes. A postal survey was carried out on 1200 firms selected at random from this population. The questionnaire consisted on 30 questions in total, some eliciting factual information and others asking about behavior and attitudes. The intention was to obtain about 300 responses, based on an anticipated response rate of at least 25 per cent. In fact, there were 298 responses, which means that response rate was 24,8 per cent. There were 6 questions on factual information (demographics of workers and firms): age, gender, education, position, years on work, and size of the firm. Other 24 questions were

on four ethics issues: (1) attitude on ethical issues in general, (2) information manipulation, (3) environmental issues, and (4) law issues. These questions will be presented later in the paper. The respondents answered to questions with Likert scale from 1 to 9, with the meaning of 1 – completely disagree, and 9 - completely disagree.

Table 1. Cronbach's alpha on groups of questions

Groups of question	Number of questions	Cronbach's alpha
Attitude on ethical issues in general	6	0,637336
Information manipulation	4	0,789722
Environmental issues	7	0,708815
Law issues	3	0,633500

Reliability analysis was conducted and number of questions was reduced to 20 according to Cronbach's alpha. This included four separate scores measuring four dimensions of ethical attitudes and behavior, ranging from 0,63 to 0,79. We concluded that the questionnaire has satisfactory internal validity, as two of four scores have alpha higher than 0,7.

For the present study, we calculated average score for each groups of questions, which measure an attribute for a respondent's ethical attitudes and behavior. These four scores together with six questions on factual information and each of the 298 responses comprises 10 attribute values, i.e. a eleven-dimensional measure of the respondent's type. The 298 responses in total can be conceptualized as a cloud of 298 points in eleven-dimensional attribute-space.

The first six questions are concerned with factual information on worker's and firm's demographics. They are listed in Table 2, together with possible responses. The mean value and standard deviation for each attribute are also listed. However, one should be cautious in their interpretation, because some of the variables are numeric and other is ordinal. Therefore, we treated ordinal scales as cardinal, but the still function as useful measures of tendency towards top or bottom of the scale. For example, a mean value of 3,77 for the education attribute means that there were more respondents from the higher than lower education groups. It can be also deduced from the table that approximately 48 percent of the respondents were male, and 52 are female.

Table 2. Worker's and firm's demographics

Attribute	Possible values	Percentage (%)	Mean value	Standard deviation
Age	Numeric	-	37,73	9,88
Gender	1 = male	47,98	1,52	0,50
	2 = female	52,01		
Education	1	0,34	3,77	0,63
	2	1,02		
	3	28,23		
	4	62,59		
	5	7,14		
	6	0,68		
Position	1	50,36	2,06	1,21
	2	12,59		
	3	17,63		
	4	19,42		
Years on work	Numeric	-	15,14	9,29
Firm's size	1	43,88	1,75	0,76
	2	36,69		
	3	19,42		

The remaining four attributes are concerned with worker's agreement or disagreement with a number of statements concerned with ethical behavior and attitudes. The possible responses to these questions or statements are listed on a Likert scale, from 1 to 9, coded as 1 – completely agree, and 9 – completely disagree. Thus, a lower attribute indicates a lower level of agreement, and higher attribute means a higher level of agreement. The statements for each group of questions, their mean value and standard deviations are listed in Tables 3 to 6. As we mentioned earlier, care should be taken over the interpretation of these means and standard deviation figures, because Likert scale data are not truly numeric. However, listed means and standard deviations are useful measures for descriptive purpose.

### Respondents attitudes on ethical issues

The statements eliciting level of agreement or disagreement on ethical issues in general are presented in the following table. The possible responses to these statements were listed on a Likert scale, from 1 to 9, coded as 1 – completely agree, and 9 – completely disagree with lower attribute indicating a higher level of agreement, and higher attribute meaning a higher level of disagreement. Overall conclusion is more or less moderate positive position towards importance of conducting these ethical activities at the organizational unit level.

Mean response-values indicate high consensus that the organizational unit level should perform activities like training employees to operate according to the legal standards (2,32), actively contribute to the community welfare (2,84) and help in resolving social problems (3,03). Slightly lower agreement is present for the following organizational unit level activities including their role in society that goes beyond generating profits (3,37), commitment to very specific ethical principles (3,43) and more important position of ethical principles in comparison to the profit (3,77).

Table 3. Mean response-values for questions and statements eliciting level of agreement on ethical issues in general

Question/statement	Mean level of agreement or disagreement	Standard deviation
Give priority to ethical principles over economic benefits	3,77	1,91
Be committed to well-defined ethics principles	3,43	1,77
Contribute actively to the welfare of our community	2,84	1,73
Help solve social problems	3,03	1,78
A role in our society that goes beyond the mere generation of profits	3,37	1,98
Train their employees to act within the standards defined by the law	2,32	1,51
Average score for attitude on ethical issues in general	3,13	1,06

The popular understanding of ethical concern is a narrow view of personal behavior related to lying, stealing and cheating at the most obvious and blatant level. This view ignores the subtlety of ethics in business settings including information manipulation, environmental issues, and legal issues etc. The search

for general answers is unrealistic since each situation is in a sense unique and demands for the contextual approach, but the objective of this research is to create some general conclusions for Croatian business context.

The following table presents level of agreement on information manipulation strategy at the individual level (not organizational unit level). The possible responses to these statements were listed on a Likert scale, from 1 to 8 with lower attribute indicating a higher level of agreement, and higher attribute meaning a higher level of disagreement. General conclusion is positive attitude towards rejection of information manipulation strategies at the individual level. Respondents are not in favor of recording other candidate's office for gaining information about promotion or using destructive information meant for blackmailing persons who are in position to influence promotion within organizations. Furthermore, respondents are resolutely against blackmailing strategy to reveal important information if their demands are unfulfilled. But, strategy based on retaining information, in order to present particular person in more negative way, is somewhat acceptable.

Table 4. Mean response-values for questions and statements eliciting level of agreement on information manipulation

Question/statement	Mean level of agreement or disagreement	Standard deviation
Do not use detrimental information to blackmail a person who is in a position to help them get ahead in the organization	2,65	1,96
Do not withhold information to make someone else look bad	3,55	2,09
Do not put a listening device, such as a tape recorder, in the office of a competitor for a promotion to get information about this person	2,17	1,76
Do not threaten to give valuable company information to someone outside the organization if their demands are not met	2,40	1,87
Average score for information manipulation	2,69	1,51

Today society has concerns and interests other than rapid economic growth – in particular, a concern for the quality of life and for the preservation of the environment. Anshen (1991) writes “it will no longer be acceptable for corporations to manage their affairs solely in terms of the traditional internal costs of doing business, while thrusting external costs on the public”.

To deal intelligently with the question of business's responsibilities for the environment, one must realize that business does influence the ecological system. Much of what we do to reduce, eliminate or avoid pollution and depletion of scarce natural resources is in our collective self-interest. Basically that can be taken as a whole conclusion of this segment of the research as presented in table 5.

The possible responses to the statements, eliciting level of agreement or disagreement on environmental issues, at the level of organizational unit, were listed on a Likert scale, from 1 to 9, coded as 1 – completely agree, and 9 – completely disagree.

Table 5. Mean response-values for questions and statements eliciting level of agreement on environmental issues

Question/statement	Mean level of agreement or disagreement	Standard deviation
Prevent environmental degradation caused by the pollution and depletion of natural resources	2,40	1,77
Adopt formal programs to minimize the harmful impact of organizational activities on the environment	2,34	1,55
Minimize the environmental impact of all organizational activities	3,11	1,91
Devote resources to environmental protection even when economic profits are threatened	3,98	2,01
Pay the full financial cost of using energy and natural resources	3,05	2,05
Assume total financial responsibility for environmental pollution caused by business activities	3,34	2,12
Proceed with activities for which environmental risks can be fully evaluated and controlled	3,40	1,75
Average score for environmental issues	3,09	1,14

In the effort to conserve irreplaceable resources, to protect the environment from degradation, and to restore it to where it was before being injured, mean response-values indicate high consensus that the organizational unit level ought to perform following activities: adopt prevention programs at formal level (2,34) and avoid environmental pollution (2,40). The highest agreement on adoption of prevention programs at formal level indicate that environmental pollution cannot be stopped without business and government working together. The main proposals for revitalizing the environment conceptualize government as initiating programs that will push business into responsible actions.

One aspect of the environmental dilemma that raises question of social justice is determining who should pay the costs of environmental protection and restorations. Two popular answers to this question currently circulate: that those responsible for causing the pollution ought to pay and that those who stand to benefit from protection and restoration should pick up the tab. Statement in this questionnaire are primarily associated with the first answer. Moderate agreement is marked for the following organizational unit level activities: paying full financial costs for energy and natural resources exploitation (3,05), reducing business activity's influence on environment (3,11), full financial responsibility for environmental pollution (3,34) and continuing activities for which the environmental risks are measurable and controllable (3,40). In conclusion, respondents have more neutral attitude towards releasing financial funds for environmental restoration and jeopardizing financial income (3,98).

Ethical behavior, including environmental issues, in the business world is often assumed to come at the expense of economic efficiency. Overall conclusion of this research is that corporations have other responsibilities besides profit; they have responsibilities as well to customers, their employees, and environment and to society at large. Corporations have responsibilities beyond simply enhancing their profits because, as a matter of fact, they have such great social and economic power in our society. Business decisions can not be exclusively economic decisions, because they are interrelated with the whole social system including legal system.



The literature on business ethics in many segments references to the law. It does not imply that the only guiding principle for deciding what is right or wrong should be whatever is legal. The law reflects society's minimum norms and standards of business conduct, so it is obvious that there is a great deal of overlap between what is legal and what is ethical. Generally speaking, most people believe that law-abiding behavior is also ethical behavior. But there are many standards of conduct agreed upon by society that are not codified in law. The domain of ethics includes the legal domain but extends beyond it to include the ethical standards and issues that the law does not address.

Table 6. Mean response-values for questions and statements eliciting level of agreement on law issues

Question/statement	Mean level of agreement or disagreement	Standard deviation
Always submit to the principles defined by the regulatory system	3,87	2,22
Refrain from bending the law even if doing so could improve performance	3,41	1,75
Abide by contractual obligations even though they may be costly	3,16	2,01
Average score on law issues	3,48	1,52

The statements eliciting level of agreement or disagreement on law issues are presented in the table 6. The possible responses to these statements were listed on a Likert scale, from 1 to 9 as for the previous segments of the research. The general conclusion is slightly less positive attitude towards applying legal principles at the organizational unit level when compared to ethical, environmental issues etc. (3,48).

Somewhat indifference towards obeying legal principles may be connected with overall confidence in Croatian legal system. Evidently respondents do not find the law as a fully adequate vehicle for ensuring socially and morally acceptable business behavior. More socially responsible behavior requires, instead, that corporations and the people within them not just respond to the requirements of the law but hold high moral standards – and that they themselves monitor their own behavior. Corporations and the people must have high moral standards and monitor their own behavior because there are limits to what the law can do to ensure that business behavior is socially and morally acceptable (Shaw, 1991).

### Cluster analysis

Focus of the paper is whether the data can be usefully divided into clusters. Our goal is to discover if members of the dataset be classified as belonging to one of a small number of types, with broadly similar responses among all people who constitute a given type? This can be especially important for managers and policy makers who want to encourage ethical behavior among those segments of population where is currently rare.

Goal of the paper can be accomplished using the statistical tool known as cluster analysis (first used by Tryon, 1939). Cluster analysis is conducted with the aim to assign data points (sequences) into reasonably homogenous groups (clusters). The main issue with cluster analysis is how many clusters are to be used. If number of clusters is too big, dissimilarity within each cluster will be low, but clusters could be too specific. Therefore, result of such analysis could not be easily interpreted and generalized. If number of clusters is too low, dissimilarity within each cluster will be high, and such clusters could not produce new and useful information. Therefore, one has to be aware that there is no correct number of clusters. However, we still have to make a decision on how many clusters we shall use.

Using the standard form of the statistical package Statistica, we carried out K-means clustering, the method where number of clusters has to be determined in advance. It is possible to evaluate the distance of each data point to the cluster centre in terms of “mean distance to centre of clusters”. Table 7. shows the means

value of the distance, calculated by Euclidean distances, the most straightforward way of computing distances between objects in a multi-dimensional space. These values are plotted in Figure 1. Starting with two clusters, it would seem reasonable

The statistical characteristics of the three clusters with respect to the nine attributes under consideration are listed in the following table. The main characteristics are described below.

#### *Cluster 1*

This is the oldest cluster (highest mean age-category) with the longest work experience, and in line with it is the highest managerial positions within companies. Education is in the middle of the range as well as firm's size for cluster 1. Members of this cluster are considerably more aware of the ethical issues' importance when compared with cluster 2. and 3. Other features of this cluster are the greatest tendency towards obedience of environmental and law concerns as well as the greatest rejection of information manipulation strategies.

#### *Cluster 2*

Members of this cluster exhibit the lowest education level and conduct non-managerial positions. They are slightly younger when compared to the members of cluster 3. and accordingly have the smallest working experience. Members of this cluster are moderate positive in sensitivity towards ethical issues in general. For this cluster mean values concerning attitudes towards information manipulations strategies, environmental and law issues are very similar to the whole sample.

#### *Cluster 3*

This cluster is very similar with previously described cluster in terms of respondents' age and working experience, but with the highest educational level in the sample and managerial positions similar to the members from the first cluster. They work in relatively larger firms in comparison to the other clusters. Members of this cluster are less sensitive towards ethical issues in general and actually more neutral in their declared concern about rejection of information manipulation strategies, environmental and law issues.

Table No 7. Characteristics of the three clusters, showing the mean and standard deviation of each attribute of each cluster

		Cluster 1 (n=110)	Cluster 2 (n=98)	Cluster 3 (n=41)	Overall
Ethical issues in general	M	2,709150	3,151458	3,210000	3,076245
	SD	0,852997	1,006602	1,102363	1,021938
Information manipulation	M	2,289216	2,660937	3,030000	2,659004
	SD	1,164445	1,512097	1,641024	2,219813
Enviornmental issues	M	2,671055	3,089881	3,514286	3,089345
	SD	0,823445	1,211182	0,957663	1,269389
Law issues	M	2,816993	3,575000	3,780000	3,466156
	SD	1,371639	1,480811	1,545398	2,261778
Age	M	49,88235	36,01875	36,28000	38,77778
	SD	5,46131	8,42911	5,71086	85,40427
Education	M	3,980392	3,612500	4,100000	3,777778
	SD	0,547364	0,624324	0,614452	0,411966
Position	M	3,588235	1,187500	3,340000	2,068966
	SD	0,605854	0,391538	0,478518	1,449072
Years on work	M	25,50980	12,47375	12,54000	15,03372
	SD	6,10368	8,64598	5,53729	85,41363
Firm's size	M	1,745098	1,643750	2,000000	1,731801
	SD	0,658578	0,763531	0,808122	0,581639

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