



Improvement of Users' Perception of Corporate Social Responsibility: Visualization of Financial Statements

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ABSTRACT

Nowadays a major portion of our information about various subjects is obtained through images. This study tries to look at corporates' financial reports with a new perspective. Using images together with numbers and figures, the study used a new way to present concepts related to CSR¹ along with financial information. To this aim, CSR was experimentally examined through four hypotheses among accounting MA students. Using Confirmatory factor analysis and two independent sample t-tests, the results confirmed the use of the approaches in accounting based on Davison's viewpoint, lead to the improvement of the users' perception of all aspects of CSR.

Keywords:

visualization, Financial Statements, users' Perception, corporate social responsibility, accounting.



1. Introduction

It can be said that an image, in many cases, contains more information than hundreds of words. One of the main goals of visualization of information is supporting human thinking through the proper use of specific visual tools. Information visualization tools which are well designed can, to a large extent, help the reasoning and thinking of users (Seding, 2003). To date, many studies have been conducted regarding this aspect, each of them have focused on a specific aspect of this area. For example, Alousque (2015) investigated the visual rhetoric in advertising concerning a conceptual and perceptual feature. Furthermore, he presented some suggestions in this regard. In another study, Davison (2014) concentrated on the pictures of Financial Statements cover and presented the development of theory to guide the interpretation of visual rhetoric in pictures and photographs. Beattie (2014) suggested using narratives both in terms of methodology and procedures; he also presented a framework for thinking and doing research on the application of accounting. Davison (2007) tried to present a theoretical framework and a practical work about the visual issues using narratives and images applied in annual reports. One of the most famous studies in the field of visualization of accounting information is a research done by Moriarity (1979), which was conducted among accounting students and accountants. He designed some faces which are known as Chernoff faces. The results showed higher efficiency of using images in comparison with using financial ratios.

On the one hand, as the technology advances, most personal computers become able to change multidimensional data into complex multidimensional graphs and images, which are beyond the limited framework of figures and charts. Therefore, the present study attempts to use images in order to visualize multidimensional data and enhance the process of understanding the concepts of accounting. In addition, it helps companies to use more updated methods.

Given the importance of corporate Social responsibility (CSR) to enter global markets and to make contracts with foreign investors, this study tries to present some ways to report these concepts to the users and answer the question as to whether or not it is possible to present concepts related to corporate social responsibility, which are of great importance, in a way

that is more understandable than numeric method? To answer the above question, the study structure was designed in a way that its first purpose was to use modern technology to provide more appropriate and efficient methods of presenting companies' information and reports which lead to better perception. Then, concepts such as CSR are presented in a form different from numeral presentation, which result in better perception of the concepts presented in financial statements. Finally, the study tries to offer a new method called visualization of information, which is more efficient and faster than the existing methods; this is very practical and useful especially for financial analysts, to whom the quick transfer of content is very important.

It is expected that the findings of this study will have the following achievements: the study can expand theoretical bases of past literature in relation to CSR. In addition, it may introduce a new method for companies to present more understandable information to users; this method, if confirmed, can be regarded as a scientific achievement that is applicable for the legislators of accounting standards and capital market as well as analysts and users of financial reports. Thirdly, this study may provide a basis for future investigations in providing other concepts related to companies, such as intellectual capital and intangible assets and in the case of confirmation, it would be effective to be used in teaching different subjects in universities.

2. Literature Review

Behavioral research in accounting includes "studying the behavior of accountants or individuals whose behaviors are affected by accounting tasks and reports." This is regarded as a confirmative study in accounting. Behavioral research is rooted in disciplines such as psychology, social sciences and principles of organization. It aims to figure out why people react to the accounting information. To this aim, different models and methods are used, one of which is Brunswik lens model that contains three parts: (1) the person who makes decision; (2) the decision; and (3) the basic information (Karelaia, 2008). The focus of the study was on basic information and how they are provided. The empirical results in cognitive psychology show that in the case of more complex information, using images lead to the results that are understood faster and better in comparison

with using numerical data (Hammond, 1971; Hoffman et al., 1981). Cognitive psychologists believe that the words and visual forms are not stored in the brain in the same way. According to dual-code theory (Paivio & Csapo, 1973), human's long-term memory does not store information that is in the form of image and word in the same way. Cognitive process suggests that images are not able to be decomposed and unchanged. However, literal information doesn't have this feature and becomes pale. The reason behind choosing images is that they can impact motivating people and that they are not geographically or linguistically limited. They can also be used as an international language. In addition, images are used as a link between visual and textual elements and can be regarded as a liaison between the company and investors (Bowe, 2007).

Disclosure of CSR as a strategic plan is increasing day by day and to date many studies have been conducted on reporting this concept in companies. Podnar et al. (2007) examined the relationship between individuals' expectations of CSR and their readiness to support the socially responsible behaviors. They examined the expected relationship between company and shareholders using marketing model. Man Siu et al. (2014) presented a conceptual model to evaluate how customer preferences lead to lack of access to appropriate services. The results of interviewing 281 restaurant door-keepers revealed that after the failure to provide appropriate services, CSR can contribute to reducing the negative impacts of the cases causing customer dissatisfaction. Reker et al. (2014) studied the relationship between CSR and managers' rewards. They also investigated the managers' wages in the subsections of companies. The results showed a negative relationship between general reward and CSR.

According to Davison (2014), the images were designed and presented as follows:

Linguistic Elements: they include titles, texts, picture descriptions and words within them that control the perception of symbolic images and can be understood as an "anchor" (Barthes, 1982). To put it more simply, they mean using words in pictures.

Symbolic Elements: they act as a medium for conveying information; they also direct the induced meaning from the image and can be divided into two parts:

Concepts that are directly appeared. In other words, it means the presence of people, objects or

specific locations within the image. Consider, for example, the image of a corporation that uses a chess board to display its brand. The brand and chessboard are seen at first glance, which is considered as direct implication. In other words, this part is the required part of an image that without it no image will exist.

Concepts that induce something in an indirect or symbolic way: they imply some messages that answer the question of what the image means. In the example above, the chessboard is a symbol of competition and intelligence, which is regarded as indirect meaning and implication.

Visual Repetition: it is one of the essential elements of every human being that is the visual expression and the art of memory that can be achieved through practice and its dimensions are presented as follows:

Identity: it is a kind of repetition that has no diversity. It emphasizes diversity and multiplicity. For example, consider the image of a company producing soft drinks that presented ten identical pictures of a specific cola with the same color and the same size in its financial statements cover.

Similarity: a combination of repetition and variation is considered as a kind of similarity, which causes more aesthetic effects, involves better comprehension and contains structural, knowledge and visual reasoning comparisons. For example, in the company producing soft drinks ten pictures of a cola are presented with various sizes and colors.

Accumulation: it is one of the forms of repetition that indicates the enjoyment, abundance and lavish. In total, accumulation indicates disorder and chaos that is appeared through lack of discipline and arrangement.

Series: the repetition that represents the temporal and narrative dimension, the absence of which causes the images to remain stationary. A series may occur within a page and gives it a narrative or cartoon mode; it can also show itself from one document to another or from one year to the other. The images presented in the financial statements of a company in food industry that shows photos from various stages of the production process can be regarded as an example.

Corporate Social Responsibility is a duty of private enterprises in the sense that it should not have a negative impact on the social life in which they work. To measure CSR, the following four aspects have been used (Podnar, 2007):

Economic Responsibility: conceptually, it means the corporation's ability to make higher profitability. When the organization earns the required profit and guarantees its life, it can pay attention to other responsibilities. In fact, the primary organizational goals are considered in this aspect.

Legal Responsibility: conceptually, it means coordinating with local, national and international laws. Organizations are required to comply with general laws and regulations determined by their society. All citizens and organizations are obliged to respect the rules as a social value.

Ethical Responsibility: conceptually, it means meeting social expectations that are not written into law (e.g. avoiding harming the society, respecting moral rights of individuals). It is expected that organizations, like other members of society, respect people's values, norms, beliefs and attitudes and consider ethical criteria in their work and activities.

Philanthropic Responsibilities: conceptually, it means keeping pace with the extraordinary behaviors and activities that are considered desirable to the society; they include expectations, demands and policies of senior managers at the macro level which are done having a comprehensive view and observing unity and public interests of the country (e.g. economic participation in different social or cultural institutions).

With regard to the mentioned principles the hypotheses can be proposed and tested.

3. Methodology

3.1. Research method

This is a fundamental research since it offers a novel method for the presentation of information in financial statements of companies. In addition, based on the analyzing method, it can be regarded as an experimental basic research in which primary data and information were collected using experiment, observation and interview. The data was also analyzed using statistical methods. Regarding the data collection, the study applied a survey design. The study can be used by capital market authorities as well as those who set accounting standards; thus, it can be considered as applied research.

3.2. Data Collection

Having the knowledge of CSR and the way of presenting it in Financial Statements, MA accounting

students (studying in the second semester of the academic year 2015-2016 at the universities of Yazd) were selected as the alternative statistical population; this group was also used in previous studies (Riley, 2011; Hales, 2011; Thayer, 2011) in which the study showed high validity of the obtained results. It should be noted that all the above-mentioned students, who were selected as the study population, were tested and 302 valid questionnaires were collected for statistical analysis. Table 1 presented demographic characteristics of the respondents of the study.

Table 1. Demographic Characteristics of the Respondents

Variable	group	Percent	frequency
Gender	men	52/3	158
	women	33/8	102
	No answer	13/9	42
age	Under 25	24.5	74
	26-35	45.7	138
	36-45	14.6	44
	46-55	2.3	7
	Above 56	.3	1
	No answer	12.6	38
work experience	Under 5 years	36.8	111
	6 - 10	18.5	56
	11- 15	10.6	32
	16-20	5.6	17
	Above 20	3.6	11
No answer	24.8	75	
Total		100	302

3.3. Designing the Questionnaires

For designing the questionnaires, the first step was to focus on CSR. However, some elements for calculating them in dollars in Financial Statements were considered as is shown in table 2. As discussed earlier, Having provided the Financial Statements (non-visual) by utilizing the mentioned method, the images were designed and added to the related place in accompanied notes therefore it caused visualized Financial Statements. It is noted that the difference between 2 reports is just in the case of images.

Furthermore, the respondents randomly were divided to two groups. Some were given visual Financial Statements and some non-visual Financial Statements. After explain the procedures, respondents were asked to respond the questionnaires and mention the extent of their perception in Likert Spectrum.

Table2. Questionnaire framework

Component	Location in financial statement	Items added to assessment component
Philanthropic responsibility	non-operational expenses in the income statement	The expense of public welfare activities
Ethical responsibility	non-operational expenses in the income statement	The expense of moral brochures
Legal responsibility	General and administrative expenses in the income statement	The expense of legal part
Economic responsibility	Income statement	Net Profit
	Balance sheet	Accumulated Profit

3.4. Reliability and Validity

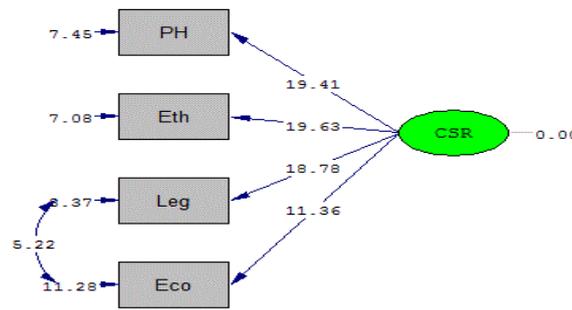
To determine the reliability of the questionnaire, Cronbach's alpha was used. Since Cronbach's alpha for the questionnaire and its variables was 0.959, which is greater than 0.7, it can be concluded that the test enjoys an acceptable reliability and to determine the validity of the questionnaire which was moderated by experts and university professors, Confirmatory factor analysis was used. Figure1 displays the results.

The numbers existing on routes indicate the t-value for each route. In this analysis, the t-statistic was

greater than 1.96 for all the items; it could therefore be concluded that the result was significant.

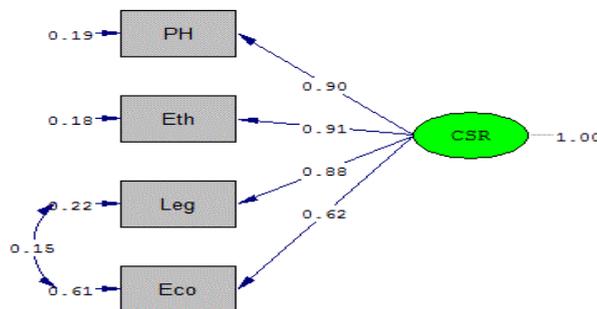
Consequently, the model enjoys an acceptable fitness and the validity of the variable structure of corporate social responsibility is approved. Figure 2 indicates standard model and related coefficients.

$$\chi^2_{df} = 0.63, NFI = 1.00, NNFI = 1.00, GFI = 1.00, CFI = 1.00, IFI = 1.00$$



Chi-Square=0.63, df=1, P-value=0.42780, RMSEA=0.000

Figure 1. The model in the form of significant numbers (t-value)



Chi-Square=0.63, df=1, P-value=0.42780, RMSEA=0.000

Figure 2. The model in the standard coefficients state

Table3. The coefficient of determination and t-test statistic in the model of CSR

causal relationship	R ²	t-v	standard coefficients	Result
CSR-philanthropic responsibility	0.81	19.41	0.90	Confirmed
CSR- ethical responsibility	0.82	19.63	0.91	Confirmed
CSR – legal responsibility	0.78	18.78	0.88	Confirmed
CSR-economic responsibility	0.39	11.36	0.62	Confirmed

4. Results

Two different independent sample t-tests were conducted to test the assumptions. In the first type of the t-test, which is known as Levin test, the hypothesis of equality of variances was examined. If the significance level of Levin test is smaller than 0.05, the hypothesis of equality is rejected and t is reported in the second row. In the second test, t-test is conducted for equality of the means. If the significance level is smaller than 0.05, difference between the average scores of two groups is significant.

The assumptions and results of the statistical analysis of the assumptions are presented below:

H₀. (The main hypothesis): visual Financial Statements improve users' perception of Corporate Social responsibility.

The results of testing the main hypothesis are presented in the table 4:

The mean score of the two groups shows that the mean score of social responsibility perception for the group with visual financial reports is greater than that of the group with non-visual financial reports, As a result, it can be said that the hypothesis is confirmed

and the proposed method is effective in improving perception of the respondents.

To examine the issue more closely, social responsibility was examined based on its components in four dimensions, which are presented as follows.

Philanthropic Responsibilities are keeping pace with the extraordinary behaviors that are considered as desirable; it is regarded as the highest stage among the dimensions of social responsibility that the observation and disclosure of them is necessary for companies (Podnar, 2007). In this study, a new way of reporting this kind of responsibility is presented to the users, which has been little studied in the field of accounting and is investigated in sub-hypothesis 1:

H₁: (Sub-hypothesis 1): Visual Financial Statements improve users' perception of Corporate Philanthropic responsibility.

The results for the first sub-hypothesis are presented in the table 5.

Given the significant difference between the mean scores of the two groups, it can be concluded that Visualized financial statements, improve the perception of users of the company's Philanthropic responsibility.

Table 4. The results of statistical analysis of the main hypothesis

Concept	Levene's Test			t-test			comparison of means			Result
	Assumed	F	Sig.	t	df	Sig.	Group	means	SD	
CSR	Equality	34.851	0.000	5.681	300	0.000	Visualized	3.3294	0.55561	confirmed
	Inequality			5.747	248.039	0.000	N.visualized	2.8146	0.95514	

Table 5. The results of statistical analysis of sub-hypothesis 1

Concept	Levene's Test			t-test			comparison of means			Result
	Assumed	F	Sig.	t	df	Sig.	Group	means	SD	
philanthropic responsibility	Equality	12.633	0.000	4.995	300	0.000	Visualized	3.2547	0.78333	confirmed
	Inequality			5.023	284.293	0.000	N.visualized	2.7322	1.00065	

Ethical Responsibility .companies supply their sources, labor forces, mainly from local communities. Companies will be more successful when they have more educated employees and when their employees

grow in the positive environment. Observing ethical responsibility in companies and also reporting it is of great importance to the corporations, which is examined in the present study through the following

hypothesis. The obtained results are presented in the table 6, showing that visual financial statements lead to the improvement of users' perception of the concept of ethical responsibility of companies so the use of images is introduced as an approved way to express and report ethical responsibility of corporations.

H₂: (Sub-hypothesis 2): Visual Financial Statements improve the users' perception of corporate ethical responsibility.

Legal Responsibility. Observing laws such as making no environmental damage and pollution is the responsibility of all companies since all of the society enjoys its benefits. In addition to the fact that there are requirements for observing such laws, it seems that some procedures must be introduced for reporting it. This study tries to introduce simpler and more practical methods for this purpose. For this reason, the following hypothesis is considered and tested.

H₃: (Sub-hypothesis 3): Visual Financial Statements improve the users' perception of corporate legal responsibility.

The results of statistical test for the third sub-hypothesis are presented in the table7 indicated that the hypothesis is confirmed.

Economic Responsibility means profitability in financial statements which is shown by the numbers and figures so that the income statement represents costs and revenues of a firm and their difference as a gain or loss is quite evident in the corresponding report. However, in order to find complementary ways to disclose this responsibility, the following hypothesis is proposed, which seeks to investigate the effect of images on the perception of the related concepts.

H₄: (Sub-hypothesis 4): Visual Financial Statements improve the users' perception of company's economic responsibility.

The result of testing the fourth sub-hypothesis is presented in the table8 and confirms that

Table 6. The results of statistical analysis of sub-hypothesis 2

Levene's Test				t-test			comparison of means			Result
Concept	Assumed	F	Sig.	t	df	Sig.	Group	means	SD	
Ethical responsibility	Equality	19.264	0.000	6.283	300	0.000	Visualized	3.4010	0.71036	confirmed
	Inequality			6.333	275.043	0.000	N.visualized	2.7654	1.01128	

Table 7. The results of statistical analysis of sub-hypothesis 3

Levene's Test				t-test			comparison of means			Result
Concept	Assumed	F	Sig.	t	df	Sig.	Group	means	SD	
Legal responsibility	Equality	24.311	0.000	4.964	300	0.000	Visualized	3.3769	0.69215	confirmed
	inequality			5.018	260.941	0.000	N.visualized	2.8585	1.05162	

Table 8. The results of statistical analysis of sub-hypothesis 4

Levene's Test				t-test			comparison of means			Result
Concept	Assumed	F	Sig.	t	df.	Sig.	Group	means	SD	
Economic responsibility	Equality	18.025	0.000	3.347	300	0.001	Visualized	3.2737	0.81442	confirmed
	Inequality			3.376	273.831	0.001	N.visualized	2.8892	1.12180	

5. Discussion and Conclusions

Nowadays relations between companies and consumers have been evolved and user's expectations of companies have changed; companies are aware of it and are looking for a way to estimate the expectations of society. Providing quality services that will lead to customer satisfaction is very important for companies; thus, companies are seeking to meet people's expectations and demands.

For above mentioned reasons, some matters are crucial for society and company audience, so companies voluntary act in accordance with regulations And in some cases act above the law for achieving reputation .However, reporting and transmission of information to outside the company is no less important than the steps above .considering current accounting methods, information would be transferred by use of numbers in Financial Statements.

The aim of the study was to provide more appropriate and more up-to-date methods for presenting concepts of CSR. The results of testing hypotheses confirmed the effectiveness of the proposed approach in improving users' perception. Thus, it can be used as an approved method to present various concepts such as the regulatory, ethicality and concepts that are not directly extracted in companies. On the one hand, the transfer of concepts and information can be accelerated, that is considered as one of the aims of the study being confirmed hereby since it is expected that looking at images and their corresponding texts takes less time than analyzing the numbers in financial statements. On the other hand, using directed images don't require intricate knowledge of accounting to extract the corresponding concepts. Thus, according to the obtained results, they are considered a quick and reliable tool. That is based on cognitive theories. In addition, the findings of this study are consistent with those of Hammond (1971), Hoffman et al. (1981) and Moriarity (1979). It can have achievements in developing theoretical bases of accounting since it offers a new method of presenting accounting information using the cognitive theories in psychology. Thus, as the proposed method, its applicability and use of the images in corporates' internal reports are confirmed, it seems that this study can be the basis for setting accounting standard. It can also be used by stock exchange authorities for adopting stock exchange standards and rules.

Based on the obtained results, some recommendations are made as follows:

In some countries (including Iran) directed images and images with particular implications are widely used in companies' reports such as Council Reports to Board of Directors and other internal reports. In other cases, images are also used in designing the cover of financial reports (Davison, 2014). Because of the wide use of images in this area, those who set standards in stock exchange and other financial areas are recommended to establish rules for using neutral and objective images. Users are recommended not to consider the images provided by the company merely as advertising and decorating items. Given the impact of images on perception the concepts (which is also examined in the current study), users are suggested to pay more attention to the images in analyzing the cases presented along with numbers and titles. Managers are recommended to use images and tools such as

information visualization techniques as well as presented framework for presenting and conveying desired meanings and concepts, especially the concepts that are not transparent and cannot be easily extracted from the financial statements including intangible assets and intellectual capital. The obtained results indicate the practicality of using visual images in financial statements. Therefore, managers are recommended to consider the above-mentioned issues in the design of trademarks, websites and electronic reports. Consequently, it is recommended that faculty of accounting training institutions use the theoretical framework presented in this study to visually train different concepts to accounting and auditing students.

In addition, with regard to confirmation of this issue in the confidence level of the above assumptions, this study can be used as a guide and basis to further research on accounting. For example, in addition to images, colors and size can also be used to transfer information.

Considering the fact that users and audiences of companies are human and possess various features and knowledge, focusing on demographic characteristics is very important for data analysis. It seems female comparing to male show more interest in using images that caused distinct perception among them. On the other hand, the more work experience of accountants on the extract of information in the context of the financial statements, numbers and related locations, the less attention would they pay upon images and additional issues. Other demographic characteristics such as age would also have effect on perception and is recommended for analyzing the results and future researches.

References

- 1) Alousque, I. (2015). Determining the rhetorical nature of visuals in advertising. *Social and behavioral sciences*, 173, 234-240.
- 2) Barthes, R. (1982). *Rhétorique de l'image*. In *L'obvie et l'obtus* (pp. 25-42). Paris: Le Seuil (Barthes (1977). *Rhetoric of the image*. In *Image, music, text* (S. Heath, Trans.) (pp. 32-51). London: Fontana Press).
- 3) Beattie, V. (2014). Accounting narratives and the narrative turn in accounting research: Issues, theory, methodology, methods and research framework. *The British Accounting Review*, 46, 111-134.

- 4) Bowe, H., Martin, K. (2007). *Communication across cultures. Mutual understanding in a global world.* Cambridge: Cambridge University Press.
- 5) Davison, J. (2007). Photographs and accountability: Cracking the codes of an NGO. *Accounting, Auditing & Accountability Journal*, 20, 133–158.
- 6) Davison, J. (2011). Barthesian perspectives on accounting communication and visual images of professional accountancy. *Accounting, Auditing & Accountability Journal*, 24(2), 250-283.
- 7) Davison, J. (2014). Visual rhetoric and the case of intellectual capital. *Accounting, Organizations and Society*, 39, 20-37.
- 8) Desanctis, G. (1984). Computer Graphics as decision aids: directions for research. *Decision Sci*, 15, 463-487.
- 9) Dickson, G.W., Desanctis, G., McBride, D.J. (1986). Understanding the effectiveness of computer graphics for decision support: A cumulative experimental approach. *Communications of the ACM*, 29, 40-47.
- 10) Hales, J., Xi (Jason), K., Venkataraman, S. (2011). Who believes the hype? An experimental examination of how language affects investor judgments. *Journal of Accounting Research*, 40(1), 223-255.
- 11) Hammond, K.R. (1971). Computer graphics as an aid to learning. *Science*, 17, 903-908.
- 12) Hoffman, P.J., Earle, T.C., Slovic, P. (1981). Multi-dimensional functional learning (MFL) and some new conceptions of feedback. *Organizational behavior and Human performance*, 27, 75-102.
- 13) Karelaia, N., Hogarth, R.M. (2008). Determinants of linear judgment: A meta-analysis of Lens model studies. *Psychological Bulletin*, 134(3), 404-426.
- 14) MacKay, D.B., Villarreal, A. (1987). Performance differences in the use of graphic and tabular displays of multivariate data. *Decision Science*, 18(4), 535–546.
- 15) Man-siu, N.Z., Kwan, H. (2014). Effect of corporate social responsibility, customer attribution and prior expectation on post-recovery satisfaction. *International journal of hospitality management*, 43, 87-97.
- 16) Moriarty, S. (1979). Communicating financial information through multidimensional graphics. *Journal of Accounting Research*, 205–224.
- 17) Paivio, A. Csapo, K. (1973). Picture superiority in free Recall: Imagery or dual coding. *Cognitive Psychology*, 5, 176-206.
- 18) Podnar K. Golob, U. (2007). CSR expectations: the focus of corporate marketing. *Corporate Communications: An International Journal*, 12(4), 326-340.
- 19) Rekker, S., Benson, R., Faff, R. (2014). Corporate social responsibility and CEO compensation revisited: Do disaggregation, market stress, gender matter. *Journal of Economics and business*, 72, 84-103.
- 20) Riley, T.J. (2011). *An investigation into manager's language use in earnings press releases.* University of Massachusetts Amherst, Isenberg school of Management.
- 21) Seding, Kamran ... [et al]. (2003). Application of information visualization techniques to the design of a mathematical mind tool: a usability study. *Information, Visualization Houndmills*, 2(3), 142.
- 22) Thayer, J. (2011). Determinants of investors' information acquisition: Credibility and Confirmation. *The Accounting Review*, 86(1), 1-21.

Appendix

A. The image corresponding to legal responsibility:

1. **Linguistic elements:** compliance with the law: the installation of sewage treatment system in company. **Symbolic elements:** Using green nature together with sewer output, that show the healthy outputs which preserve the environment. **Repetition:** assimilation (repetition + variation)



B. The image corresponding to voluntary responsibility:

2. **Linguistic elements:** the donation of medicine to patients in need. **Symbolic elements:** the logo of MAHAK institution with attractive color and flower (symbol of kindness) and **repetition:** identity (repetition + variation)



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¹ Corporate Social Responsibility