



Programming And model sensing applications using visual arts to improve the understanding of the information contained in financial reports

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ABSTRACT

Although the content superiority to figure is one of the major issues among accountants and fiscal data providers, effects of figures on transferring data and increasing its perception must not escaped the notice. A major purpose of this research is deliberation of using and not using visual arts in increasing the ability of perception of data inserted in fiscal reports. To this aim, at first using the systematic elimination method, 32 out 37 companies in pharmacy industry chosen as the primary sample of research during the fiscal year of 2013. After the industry sampling the company's financial reporting Tehran drug to to randomly to be select color and size. The original research (researcher) using Excel software programming and graphics were prepared financial statements, the outcome of this process through the application of innovative collected. Then design a questionnaire survey among 24 experts, was tested programming model. The results of the experts using spss software and statistical methods were approved in a society.

Keyword:

Visual arts, aesthetics, psychology of colors, the ability to understand, Financial Analysts

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INTRODUCTION

Accounting as one of the phenomena of society, the responsibility to provide information in the form of financial reports to its users. Readability and understandability of accounting reports is one of the issues that have been considered recently accounting. Some researchers believe that companies with better performance, understandable and legible reports to offer (Setayesh et al, 2011).

In recent years there is a strong tendency to use behavioral theories in accounting research. No such studies enriched accounting and it from a field of dry and quite tactical. This extensive research in various fields, according to the socio-political role of accounting in organizations and communities to examine the psychological factors that affect the preparation of financial statements has caused that they all accounting and environment interaction on one another. (Hofsted, 1987) In addition to this, to enhance understanding of the financial statements can be used other sciences such as psychology and art.

As mentioned above, one of the ways to increase the ability to understand financial reports from other sciences such as art. Art can be the simplest and most common case, an attempt to create delightfully defined forms. A subset of the arts, the visual arts or Visualization Art that sometimes it is also called, and specifically addressing the person's eyesight.

Emphasizing this is because usually images of objects, the closest and most true indication to understand their properties. So that by seeing the image of an object to understand what features and amenities, while hearing the name or description of the objects, their properties cannot be realized as it should be. As a result, we can say, the ability of human perception, pattern recognition and learning of facts and information, using images and illustrated the increase. (Hoseini Rad, 2013)

As well as the use of the information understandable financial reporting and the qualitative characteristics of decision-making affects so important that it has been able to obtain a good position in the hierarchy of quality properties (Financial Accounting Standards Board, 1980) So that this feature as a bridge between the user and the usefulness of information for decision-making.

This study, in the event of an attempt to provide new and innovative ways to apply using parameters such as financial analysts, trapezoidal fuzzy logic, aesthetics, Foundations of Visual Arts and Psychology of colors in financial reporting, So that using this model can be animated to traditional financial reporting, and to make readers with minimal ability to understand financial matters, to be able to make optimal use of financial reports.

Theoretical Aesthetic

To describe the aesthetics, it can be said that the relation between art and philosophy have long been on the part of artists and art theorists and from thinkers and philosophers, is considered. In the meantime the other hand, some philosophers have considered philosophy enriches the art according to Art ignore them, On the other hand, some experts in the field of art, such as Barnett Newman, believe

that artists "as need art to the theory that birds need to science ornithological. But some moderate and accepted the contentious regardless of the motives and without trying to eliminate each other, from the reconciliation accordingly and the other with recognition and this is where the confluence of aesthetics and the reconciliation of philosophy and art is born (Ashtaynbavr, 2010).

Visual Arts

Visual arts, arts-based initiative that specifically addresses their vision and hence also referred to as visual arts or visit. In other words concepts that visual elements such as line, point, surface, shape, color, texture, etc. are expressed through the visual arts and received are understandable. Visualization capabilities and scalability, variability, develop imagination, having active elements such as point, line, area, volume, shape, texture, color and qualities such as balance, proportion, harmony and contrast, especially in painting are particulars that Can provide direct and immediate experience around the world, providing images created in the mind and emotional interaction with the environment affect the improvement of human character and behavior (Namee, 1371) In this paper, the color and size as two subsets of Foundations of Visual Arts, to increase intelligibility of the information contained in the financial statements have been used.

Color

Colors are a part of life of beings and especially human. The effect of color on human life is too fancy, just a color effect can be spiritual, work, fatigue, events, art and human perception observed. The color of the main factors determining the way in which humans interact with the environment through means that one of the determinants in the visual arts, especially painting and imaging. Color can transform the uniform space into a place of spirit and fundamental impact on the lives, feelings, works of art and its artists. In a sense, the color can be the richest, most compelling and most efficient element of eternal life and works of arts and Iran. (Mohseni and Nafari, 2000) colors used in this article is Light blue and hundreds whole red and green.

Volume

Objects with three dimensions: length, width and height or depth is called volume. Usually all the material things in nature is volume. Although some of them may have a thickness in addition to the length and width, depth or height, but very little volume that would occupy part of the space. In visual art in three dimensions be extended if a point or a segment move in a different direction, the embodiment of the volume. And therefore the visual arts and material volume may not always tangible but visually exist, in which case it can be said virtual volume (Hossene Rad, 2013).

Color Psychology

All men connected with its surrounding environment. This relationship, sometimes thinking, look at by touching, tasting, hearing, smelling or by seeing. humans see color their surroundings and the colors in their leaves traces, whether positive or negative. This effect may be physical or psychological in psychological dimension is clearer and more importantly.

Psychology of color, newly born science that examines the psychological effects of color on humans. Quran This world is not bereft of human and taste of this science is of the fourteen centuries ago to his appetites.(Sharefi,2014) Psychology 3 colors used in this study is detailed in the following states.

Red: The color red has the longest wavelength due, stimulating color, physical and strong. It is this feature that is closer than it seems at first to draw attention to herself. That is why at traffic lights and alarms the world of the colors used.

Blue: blue is soothing the mind and basically color such as red rather than a physical effect that effects on the mind. Dark blue stimuli clear thinking and light blue leads to peace of mind and invites to silence. Such as red, blue objects do not seem closer.

Green: When the green in front of the eye, no need to adjust the balance and other things, so the color is rich in comfort. However, they would be creating a balance of colors in the spectrum. Around the world contains a lot of green paint, water and low risk of famine, the most important is the concept of green color to people's confidence.(Color and Imaging Institute,2004)

Visual arts, spectrum and psychology colors

Visual Arts understand the rules and principles governing the events and due to the effects of colors can invent scenarios that affect perception and behavior. Itten1974 It is believed that the color of life, because the world is without color seems dead, colors and have the ability to communicate with their enormous power despite the significant facts of the day. Elliot and Maier2007 Believe that colors can affect the permanent human learning systems, leading to better understanding and easier to get information. The following principles should also be noted that in the psychology of colors.

- 1- The colors can express a process.
- 2- The color effects are impulses (colors to be brace).
- 3- Automatic color psychology is to stimulate operators.
- 4- the meaning and influence of colors is understand.

The ability to understand information

Information deemed to be understandable for ordinary users who have a reasonable knowledge of accounting, they are understandable. And possibly operations and financial events in plain language and common terms describe. An important factor in the understandability of financial information, how to deliver them. This means that the information provided is properly classified. At the same time should provide complex information that can be useful for decision makers under the pretext of difficulty of understanding by some users, regardless of the provider although most complex information simply must try as much as possible be respected (Meshki and Moghadam,2006).

Financial Analysts

The Financial Analysts are the manner in which financial information makes it possible for users to access information when making decisions for economic purposes, it is also a specific way, achieved through existing information systems, poor access to them. So professional skill, has reasonably be provided the necessary information to make decisions. Detailed figures are items in the financial

statements has made it necessary to conduct financial analysis are summarized in the form of figures, analysis and interpretation and increase their ability to exploit(Niko maram et al,2002) In this paper, using financial ratios and financial analysis, vertical analysis, is used.

Fuzzy Logic

The major common tools for modeling, reasoning and computation of definite, certain, well-defined. The certainty of the two is part of the Yes or No, instead of more or less. In conventional binary logic, a statement can be true or false. But thoughts and feelings of humans or get involve concepts that people use words to express them is not enough. If the power of a living language to be compared with a logical language, logical language would be poorer. So, mapping one of the issues and systems using the language of arithmetic or logic not possible(Niakan,2013)

Fuzzy logic is considered the easiest to define "fuzzy logic rather than answer a question correctly or incorrectly divided into two parts (the Aristotelian binary logic), originally developed a range in between is the answer. Common examples, there are shades of gray between black and white in color range.(Kordestani and Rahimi,2009) In this paper, color and size on the financial statements are used the trapezoidal membership functions.

Beautiful place of the information

According to the proposed definition of aesthetics in order to extend the range of information can be stated as follows. primary level, where only a trend curves are used to represent information Easier. Basically, this method presents annual financial statements as additional information became known, sometimes in the form of tables and graphs are presented. In Iran presentation of information in the report, which is primarily the function of the Board of Directors on an annual basis and is prepared to provide this information to the General Assembly the same level . Basically, this information is known Infographics. The middle level involves the application of information designed. At this level of information to increase comfort and ease of use art to be employed. For example, for lack of a sense of fatigue and design defects related to case. This Information Design designed to say. The final level degree encompasses the provision of information that it tries to use all-round visual arts in order to enliven the information. At this level of art in order to provide better information is used In other words, the level of shapes, designs and colors and have information content potentially replace text and phrases. This level of visual arts or visual aesthetics is said. This research aims to illustrate the application of the final level of aesthetics in corporate finance reports. Foundations of Visual Arts, which tries to use part of the information content of the financial statements without the transfer of text and phrases. This level of aesthetics is very useful in the environment, but still its original position is not in financial reports and accounting information systems. For example, green leaf Customs and transit of goods means the legal authorization and the absence of a constitutional prohibition to enter or exit of goods, regardless of the type of product is, how is how to transit, and ... another example of the application of the principles of visual arts, the color of the traffic lights. When drivers encounter a red light means that in order to respect the rights of others, to maintain order and respect for commuting and maintain your health, you should

stop moving. Therefore red traffic lights have information content is to users (Setayesh et al, 2011)

The effect illustrated and use of visual arts on the intelligibility of information

The ability of human perception, pattern recognition and learning of people using images and illustrations of facts and information increases. In other words, the information visible through the visual arts could lead to increased understanding of information. In other words, when the data illustrated or designed on the basis of a certain color spectrum, will be providing that lead to part of the

Table 1: spectrum for tax reporting

The volume of interest (5 houses)	Color	Kind of
The greater the number of columns are more color (green)	Whole green 	good
Always 5 house is color (aqua)	Pale blue 	Normal
The bad greater the number of columns are more color (red)	Whole red 	Bad

METHODOLOGY

Population, sample and research sampling method

First statistical population consists of pharmacy companies accepted in Tehran security exchange. The first reason for choosing this industry is its complete and up-date data and the second is a low level of differences and frequencies between data in companies' reports. Because a big difference in numbers of reports can have effect on research's result. Pharmacy industry includes 37 companies that data of all cannot be used for this research. To this aim, utilizing the systematic elimination method, 32 companies elected as the first sample of study. The specific features, considered for the samples of study are as follow:

1. Organizations must be active in pharmacy industry.
2. Their fiscal reports must be audited.
3. Their fiscal reports must be culminated in 29 Esfand 2013.
4. Their data must be accessible.

After specifying sample companies, fiscal reports of Tehran Company elected randomly for coloring and voluming. Second statistical population includes specialists in accounting and security exchange of Fars and Yazd provinces. The number of people who are active in accounting and security exchange cannot be specified in above groups. As a result it can be said that the volume of above groups are infinite. So, according to Morgan chart 384 (400) members chosen as the second sample of research.

THE WAY OF CONDUCTING RESEARCH

In order to conduct this research, the following process was arranged in order:

1. Making theoretical framework using membership function of a trapezoidal fuzzy set.
2. Collecting and classifying primary data using Rah-Avard.
3. Collecting specialists' idea about number movement inserted in fiscal reports.
4. Formulating theoretical framework using Excel software.
5. Transferring primary data to designed software and coloring fiscal reports.

information content available prior to visualization only with study tables and taxes may be written description in the forms of STI policies, can now be induced using colors to users.

6. Confirming framework by collecting specialists' idea to achieved results.
7. Arranging the questionnaire (in order to collecting and hypothesis tests).
8. Distributing questionnaire between two groups and collecting the secondary data.

Research modeling

In this study, the trapezoidal membership functions are used to stain analysis of financial reports. Trapezoidal fuzzy model used in the study is symmetrical trapezoidal fuzzy. As mentioned in chapter two, trapezoidal fuzzy number is composed of four core boundaries are fuzzy. In this study, the mean and standard deviation analysis of financial reports for each of the foundations of fuzzy. The main research is necessary before the speech model divides done on a trapezoidal membership functions explained. On the basis of a trapezoidal membership functions, 5 ranges is composed as follows:

1. Fuzzy core (b-c)
2. Right border (c-d)
3. Left border (a-b)
4. out of range (d-∞+)
5. out of range (-∞-a)

Mentioned range on trapezoidal fuzzy membership function, shown in Figure 1.

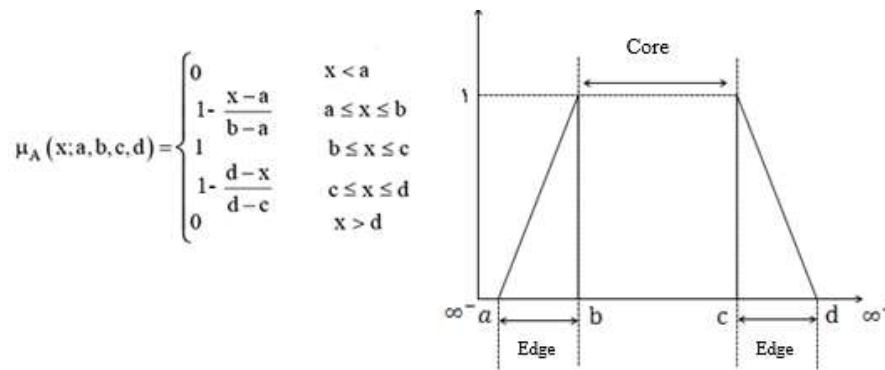


Figure1- View on trapezoidal fuzzy membership function and scope of the study (Faramarzyan et al, 2011)

The main models that use is made of the experts and for researchers, as given below:

$$c \left\{ \begin{array}{l} a = \mu - 3\sigma \\ b = \mu - .5\sigma \\ = \mu + .5\sigma \\ d = \mu + 3\sigma \end{array} \right.$$

Formula 1: the model (self-made)

Average: One of the crucial issues in statistics is calculate the value of a large mass concrete presentation of information and statistical data.(Tabibee et al,2013) So, to summarize and present data and a better understanding used of the core index. Average values in addition to the overall level indicator, represents the size of the groups are set which can be determined by comparing them with each set was similar, and thus the relationship between the variables examined(Moheb and Askare,2011) Posts addition to what was mentioned as the industry average and is also used in this study is also being used in the same way.

SD: The bulk of statistical methods to determine the extent and distribution or calculate the correlation of different statistical distributions variables(Tabibee et al,2013) One of the most important and valid measures of dispersion and variability data, standard deviation and standard deviation of the average reported in the literature(Moheb and Askare,2011) SD is one of the most important ways to measure the deviation statistical values is in the social sciences. In fact, without the use of standard deviation judgments about data specifications subject is not possible(Tabibee et al,2013) With so much was that the standard deviation, SD in this study to measure the error rate than the industry average and is used to determine the core and trapezoidal fuzzy boundaries.

Multiplied by the standard deviation in 0.5 kernels due to the smaller and larger phase of its borders. This action due

to a more sensitive model to illustrate good and bad conditions. The third reason is that the majority multiplied by the standard deviation in the data analysis phase of the financial reports for the color and off-limits data to minimize.

For fuzzy color range and color range of 3 green, blue and red is used as follows:

- 1- Nuclear phase: all figures are in the range that has a membership degree 1 and tend to take blue.
- 2- Border-right-left figures with membership degree between 0 to 1 the two ranges based on expert opinion that goes on in this have to be perfect, to have a range of green or red.
- 3- Out of Bounds: The numbers are not in any of the above data are considered out of range and not representing any color with black and membership grade, are shown.

The following figure (self-made) color ranges are as follows:

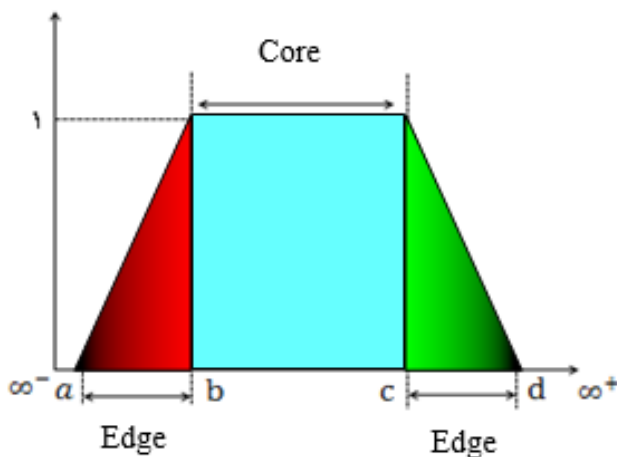


Figure3- Color ranges for figures to more of them the better.

Description of each color and how to use them in the programming model is given.

Collecting specialists' idea about number movement inserted in fiscal reports.

Before coloring and voluming the results of number analysis inserted in reports, it must be considered which way of movement is better for numbers. In other word it is necessary to be specified that whether the increase of numbers are good or bad? This subject is not related to nature of numbers and must be considered as a general condition of companies and displays that specifying number movement can help to specify the companies' condition.

As the researcher is not allowed to mention his idea in the study, the specialists' ideas were used. To determine the validity of the measurement tool, the questionnaire delivered to 20 specialists within an introduction and complete explanation and the specialists were asked to express their idea in two spectrums.

Questionnaire to gather experts and tests validity

Before color and size on the results of the analysis and the analysis of the figures contained in the financial statements must be specified that each of these figures, if you move in what direction, better or worse. In other words, if more or if less are to be determined which varieties are better? It had nothing to do with figures nature According to the company's overall situation are clear and indicate that we can determine the direction the company is moving toward profitability or losses. As the author of this right to comment on the analysis of the figures contained in the report is financial, experts' opinions were used. In this regard, the company's financial reports in the form of a questionnaire was developed and after reliability test, was in the hands of experts. To determine the validity of the measurement tool, a complete description of the variables in the questionnaire, along with an introduction and a number of professors of Islamic Azad University Yazd and they were asked their opinions about the face and content validity of the questionnaire. After receiving the responses, using CVR was confirmed validity.

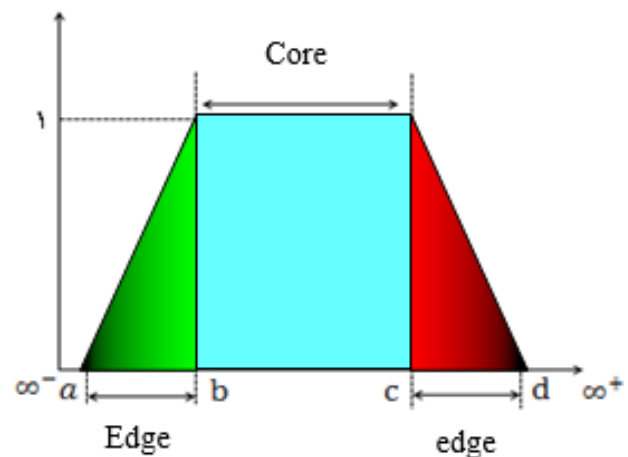


Figure2- Their color ranges to varieties that less is better.

Distributing and collecting questionnaires and determine the mean comments

questionnaires distributed between 12 experts and were asked that their opinions on the state of the financial report analysis than the industry average companies surveyed put their opinions in 2 whole, express. In other words, they were asked, according to the company's overall situation, for example, measures the cash account and determine that the increase in cash reflects the company's positive or negative performance and vice versa.

After collecting the questionnaires, the comments were classified using Excel software, and they were averaged to move any analysis of the figures contained in the financial statements to be determined.

Research models using Excel software programming

Classification and coding model study was conducted using Excel software. In this regard, formulas and functions in order to color and size on the analysis of the information contained in the financial statements have been applied.

In this study, the company's financial statements in addition to the title column and column number, three additional columns added. The column names are as follows:

Table1- An example of color reports provided to users (researchers)

-	-	1	2	3
Title	Company number	Bench Company	Industry Index	Color and Size

- Columns and column number as a company that exists in all financial reports.
- Company characteristic: vertical and introduce the analysis of financial ratios of the company's financial figures contained in the report (Tehran Daru) is.
- Industry Index: represents the industry average analysis of financial reports for the purpose of

analyzing the figures contained in the financial statements of 32 companies have been used.

- Color and size: According to research models and expert opinions on the analysis of the figures contained in the financial statements using the programming, specific to their own cultivars, color and size.

Data entry to software and Color financial reporting

It should be noted that the membership function fuzzy trapezoidal number 1, represents the degree of membership is full and can allocate the highest amount of color. The number 0 represents the membership degree is not black and not representing any color percentage is allocated. . . But in this study, with a membership degree, hue and volume data (ie, the degree of membership is better or worse. And vice-versa), on both the left and right border, the date of 1 Low be.

Colored figures for financial reporting practice will be as follows:

It should be noted that the membership function fuzzy trapezoidal number 1, represents the degree of membership is full and can allocate the highest amount of color. The number 0 represents the membership degree is not black and not representing any color of the accounts.

But in this study, with a membership degree, hue and volume data (i.e., the degree of membership is better or worse. And vice-versa), on both the left and right border, the date of 1 Low be.

Green: According to the interpretations that were made of green in the theoretical principles and objectives of the research, the color green represents growth, comfort, color balance and short to determine good and excellent condition, is introduced. The green color used in this study, ranging from bright green colors with a membership degree 1 minus 1 (model presented in Figure-1), which represents the least well-calculated The model has the darkest green color with the membership rank 1 minus 0 (model presented in Figure-1), which represents the maximum calculated in the model is good, is.

Blue: Blue color according to the interpretations that were made in the theoretical principles and objectives of the research, the color blue represents the calm, soothing, inviting silence and short color to determine normal conditions, has been introduced. The blue color used in this study, single light blue with a membership degree 1, with no minimum or maximum.

Red: The color red interpretations that were made in the theoretical principles and objectives of the research, the color red represent the welding movement, aggression, attention and color to determine the short and alarm conditions, have been introduced.

The red color used in this study range from bright red colors with a membership degree 0 that represents the least bad calculated In the darkest green color with a membership model to one that represents the maximum calculated in the model is bad, is.

The figures for the volume of financial reports are as follows:

Volume report on the financial figures that express a color for each volume figures for width, length and height specified. The digits to the financial statements in this research for practice that column about the color and size can be divided into 5 equal parts. Each of the 5 episodes included are 20% of the membership.

The 5 position is as follows:

- If a house be filled: The green color indicates a good condition and the red represents the bad state (data with a membership degree of 0 to 20%).
- If the house is: The green color indicates a relatively good state, and red indicates a fairly bad state (Data with a membership degree 20% to 40%).
- If three houses to be filled in with green represent very good condition and the red color indicates very bad state (data with a membership degree 40% to 60%).
- If four homes be filled in with green represent very good condition and the red color indicates very bad state (data with a membership degree 60% to 80%).
- If five houses to be filled in quite good condition and the green represent the color red indicates a very bad state (data with a membership degree 80% to 100%).

In the first column of the model and according to the degree of membership, the data revealed that the total fine color (green) or bad (red) or normal (blue). Then, according to the degree of membership, the corresponding column will be filled homes and figures given volume.

Data entry to software and Color financial reporting

In the final step the data collected and classified as input, or input to the program will be designed with trapezoidal fuzzy model. The model was designed after processing, the output color are financial reports that users with minimal understanding of accounting can analyze them and used their economic decisions.

Preparation and distribution of a questionnaire to gather expert opinions on the assessment of model.

Before using and enforcing a model, must be approved research model because the model is self-made and before properly assessed and has not been confirmed. The following questionnaire has been prepared and placed in the hands of 20 experts to evaluate the model:

Table: An example of the questionnaire approved by experts

considerations	Expert opinion		As a result the model	Characteristic industry	Bench Company	Company number	Title
	Rejection	Accept					

description of the first four columns are shown in the programming model.

result of the research in this field results obtained with regard to the color and size of the programming model, are presented

Expert opinion: This column is divided into two parts. Certified requested the acceptance of the result of research models and acceptable option as opposed to tick off that option is rejected.

Notes: Certified asked, if the average does not accept the result after rejecting it on its own account or the considerations expressed in the column are.

Measurement model by experts of the results obtained from the model using the software spss

After distributing and collecting questionnaires, comments using spss software category and then using a community model was evaluated Posts

In this test, the average score for each account in exchange for approval of its rejection by connoisseur's number 1 and number 2 is defined. Hypothesis testing for all financial statements are as follows

H0 :This model has been approved by experts.

H1 :This model has not been confirmed by experts.

The results of tests T (population mean) to verify the model for each of these financial statements are presented in the following table

Final result	sig	positive pole	Negative pole	The number of accounts and figures contained in the report	Reports
Accepted	0/44	16	2	18	Balance sheet
Accepted	0/41	10	0	10	Profit and Loss Statement
Accepted	0/10	13	1	14	Cash Flow Statements
Accepted	0/27	30	3	33	Financial Ratio

According to the results of tests T and sig above 5% for all financial reports, it can be concluded that there is no reason to reject the null hypothesis and research model is approved.

Reference

Abdul Majid Hosseini Rad (2013). Foundations of Visual Arts, Tehran, Iran publishing textbooks.

Color and Imaging Institute, (2004), The Psychology of Color (color effect system), sponsored by careful research to test theories Angela Wright.

Hofsted, greet, (1987). the cultural context of a accounting in b.e .ushing ,ed, a accounting and culture, amery, can accounting association,1-11.124.

Helweg-Larsen R , Helweg-Larsen E, (2007). Business visualization, a new way to communicate financial information, Emerald Group Publishing Limited, Vol. 8, No. 4. pp 283-292.

Elliot A, and Maier M, (2007). Color and Psychological Functioning, Current Directions In Psychological Science, Association for psychological science, Vol,16, Number 5.

Itten, Johannes, (1974). The Art of Color, The Subjective Experience and Objective Rationale of Color, 1st Edition, Johns Wiely & Sons.

Illbagi, Elham (2001). Artist and social reality of the current Iranian society, with an emphasis on the visual arts, master's thesis, Tarbiat Modarres University.

Kurdistani Gholam Reza, Rahimi M., (2009). Application of Fuzzy Logic in accounting and financial decisions, the auditor Magazine, Issue 47.

Moheb Ihsan , Askari ,B (2011). Practical application of statistics in scientific method, Shiraz, Ahvaz Islamic Azad University.

Mohseni,H, Nafari B., (2000). General information Arts, Tehran, publisher of chastity.

Meshki Mahdi, Moghadam,Abdolkarim, (2006). Intermediate Accounting 1, Tehran, Payam Noor University Press.

Nami G., (1992). Foundations of Visual Arts, Tehran, Toos Publications.

Niakan Leyli, (2013). The use of fuzzy logic, neural networks and genetic algorithms in the insurance industry, Insurance Research, Case Report No. 19.

Nikomaram Hashem, Fereydoon Roodposhti ,Heybati,F. (2002). Fundamentals of Financial Management, Volume 1, Tehran, Press cashmere.

Shtanbaver, mania, (2010). Reflections about the aesthetics and philosophy, the newspaper the Nation.

Setayesh MH, jamalian Poor (s) and Jamali Zainab M., (2011). A model to enhance the understanding of the information contained in the financial statements using the Visual Arts, Proceedings of Ninth National Congress of Accounting, University of Sistan and Baluchestan.

Sharif Ali, (2014). The color of the Quran, Hadith and psychology, two extension Qur'an and Science Journal, Issue 14.

Tabibi Syed Jamal Uddin, Mohammad Maleki, Delgoshaei B., (2013). Composing dissertations, essays, research projects and scientific papers, Fourth Edition, Tehran, Diba.