

# Evaluating the Model of Information Transparency as an Ethical Component in Electronic Auctions in Organization for Collection and Sale of State-Owned Properties

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## Abstract

**Introduction:** Transparency can sometimes become a challenging issue, but it is necessary to foster an ethical culture. The purpose of this research is to evaluate the model of information transparency in electronic auctions in the organization of collecting and selling property.

**Material and Methods:** The present study was among descriptive-correlation studies. The target community was the users of the organization's services, the auctioneers in the movable and immovable property sector, among whom 400 people were selected as a sample using available sampling, and after the drop of 351 people, they participated in the final analysis. The tool of analysis was a researcher-made questionnaire. Structural equation modelling method and Smart PLS software were used for data analysis.

**Results:** The results of the path coefficients showed that the model has a good fit and can be used as a basis for e-business activists and property collection and sale organizations.

**Conclusions:** Transparency is an important component of professional ethics and a characteristic of organizational culture, which is revealed through the behaviour of leaders, employees and stakeholders of the organization, which is interrelated with the characteristics of the product and the perceived value, and leads to providing the interests of the stakeholders and participates.

**Keywords:** Professional ethics, Information transparency, Electronic auction

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## INTRODUCTION

The statistics published by the World Transparency Organization show that in terms of administrative health, Iran ranked 141 out of 180 countries in 2008 and 168 out of 180 countries in 2009 and 133 out of 174 countries in 2012. It ranked 131<sup>st</sup> in 2016 and 130<sup>th</sup> and 138<sup>th</sup> in 2017 and 2018. One of the ways to reduce corruption is to increase the level of information transparency. In other words, with the increase of information transparency, the space for abuses, managerial selfishness and circumventing the law is reduced.

Companies seek to create positive social impact and embed ethical behavior in all their business activities, markets and value chains. They do this by promoting ethical, transparent and inclusive policies and practices.

Showing honesty, transparency and fair behavior is a central component for building trust [1]. Therefore, the transparency of information is one of the basic and effective components of building trust in any business, and it leads to the adoption of correct, timely and effective decisions by natural and legal persons and strengthens the trust of stakeholders. This issue has a higher position in electronic businesses that are extremely popular today. One of these electronic businesses is electronic auctions. In electronic auctions, transparency of information plays an effective role in attracting customers to buy goods and services and creates their loyalty and can have favorable and pleasant effects for people who use new technologies more. The

more transparent the information is, the more credibility it brings to the organization or the auctioneer [2]. Electronic auctions have been introduced since 1990 as a standard tool for corporate sourcing. Since then, despite their widespread implementation, if it is not controlled and monitored, electronic auctions can seriously damage the relations between its participants. One of the main issues in auction design is how much information should be disclosed to auction participants [3]. This choice for disclosure varies in the public and private sectors, from the allocation of natural resources such as timber, oil rights and spectrum licenses to the sale of artwork, real estate and various commodities. Undoubtedly, the choice of disclosure policies will reflect various considerations (e.g. efficiency, privacy, etc.). For example, in the United States, due to the Freedom of Information Act, public sector procurement auctions are often subject to strict transparency requirements that require full disclosure of the bidder's identity as well as their bids. Instead, auction houses such as Christie's and Sotheby's usually maintain the anonymity of the winning bidder. One of the most important findings about information disclosure in auctions is the linkage principle, which states that sellers can increase their expected income by increasing information transparency and increasing participants' information from other auctions [4]. Also, auctions can provide more reliable information about the competition than negotiations. There is no need for the bidders to trust the bidders in knowing the auctions submitted by the other bidders. While corrupt side deals, collusion, and bid rigging may occur in auctions, they are more easily disclosed and tracked than other types of transactions [5].

In addition, the transparency of the market mechanism generally enhances liquidity. The more transparent a market is, the more informed price makers are about order flow. The more they know, the better they can protect themselves from insider harm. This link between transparency and liquidity needs qualification. As informed traders adapt their trading strategy to the market mechanism they face, we see that in a more transparent market, the price is less favorable for some order size ranges [6]. Reporting systems provide transparency for accountability and consider transparency in terms of the capability and transparency of information technology, culture and differentiation, stable transparency and credibility of data in relation to the different needs of its components [7].

Despite the popularity of using online auction websites and millions of users around the world using the web to buy and sell products, there is little understanding of

what makes users choose one auction site over another. A better understanding of customer satisfaction can facilitate the design of a user-friendly interface, thus it follows increasing the effectiveness of auction websites and improving the success of e-commerce and business applications, and creating a tool to measure online auction customer satisfaction [8].

A well-designed and efficient auction that maximizes "optimal revenue" is probably the best approach to support start-up goals and policies, reduce costs, and promote competition and innovation. While there is tension between some objectives, they are natural and controllable through auction design [9].

Considering the government's macro policies for the creation and comprehensive development of e-government and the conditions governing the country's society and economy, and considering that in the field of information transparency in electronic auctions, so far, very little research has been done in a limited manner inside the country. After extensive reviews in the research literature, the researcher came to the conclusion that there is little research on the transparency of information in electronic auctions. Therefore it seems necessary to conduct this research.

Considering that the implementation of the electronic auction requires the creation of appropriate software and hardware infrastructure and the recording of accurate and transparent property information, both movable and immovable, in the comprehensive system of the organization's property, but there are problems such as the lack of experts and manpower. came in providing clear information about goods and properties in some provinces, failure to enter information completely and properly into the system by the user, mismatch of items declared in the list of property specifications, incorrect registration of prices and incomplete and non-transparent uploading information in the system that causes confusion and doubts among the applicants to purchase property and decide to participate in the auction and submit a price offer. The continuation of this process and failure to remove the existing obstacles will deprive the property buyers of the trust through the auction. Therefore, this is a problem that the officials and involved workers have not paid attention to, and the researcher is in line with answering this problem. This research will be able to give a more comprehensive answer to the researchers' questions in the first place and reduce the problems related to the auction to a minimum and create a sense of confidence and trust in the auctions of the organization of collection and sale of property among the buyers. Therefore, it is necessary to examine

the issue of information transparency in electronic auctions in detail and to be tested seriously, and in order to achieve this goal, the researcher evaluates the model that has been presented in previous studies [10] and finds out whether the model Regarding the transparency of information in electronic auctions, is the property collection and sale organization suitable?

This research has examined the following hypotheses:

Hypothesis 1: Product features are related to information transparency

Hypothesis 2: The perceived value of the auctioneer is related to the transparency of information

Hypothesis 3: The perceived value of the customer is related to the transparency of information

Hypothesis 4: Product characteristics are related to the perceived value of the auctioneer

Hypothesis 5: Product characteristics are related to the perceived value of the customer

Hypothesis 6: Transparency of information is related to outcomes

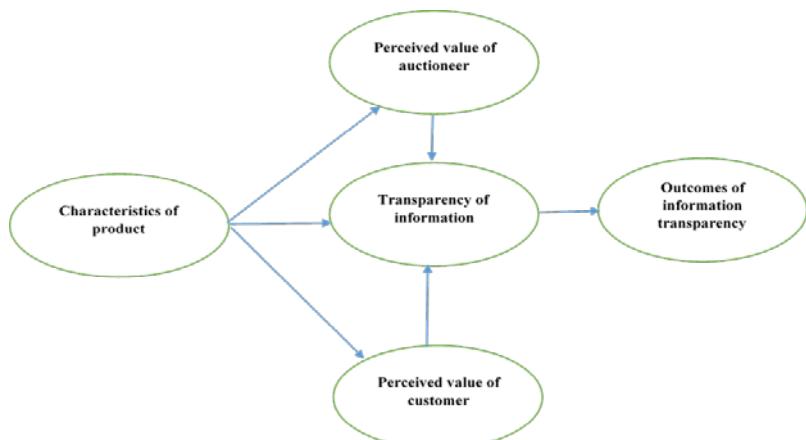


Figure 1. Information Transparency Model in Electronic Auctions [10]

## MATERIAL AND METHODS

The current research was among descriptive-correlational researches. The target community was the users of the organization's services, the auctioneers in the movable and immovable property sector, among whom 400 people were selected as a sample using available sampling, and after the drop of 351 people, they participated in the final analysis. The tool of analysis was a researcher-made questionnaire. This questionnaire consisted of 60 questions based on the five-point Likert scale. To measure the validity index of the content of the questionnaire, 88 questions with the relevant forms were provided to the experts, considering that the minimum acceptable value for the CVI index is 0.79 and if the objective index is less than 0.79 that question should be corrected and revised. In this research, after several repetitions of the questions whose score is less than 0.79 were deleted.

In order to determine the relative validity coefficient of the content of the questionnaire and the minimum acceptable value based on the number of scoring experts, 88 questions with the relevant forms were given to the experts according to the number of expert members ( $N=15$ ), the minimum acceptable value for the CVR index was 0.49 and if the objective index is less than 0.49

they should be left out. In this research, questions whose score is less than 0.49 they were set aside.

After reviewing and extracting the results obtained from the analysis of CVR and CVI forms and removing and discarding the questions that did not get the appropriate score, finally the final questionnaire with 60 questions was designed and distributed among the statistical population. With the help of SPSS statistical software, the confidence coefficient was calculated by Cronbach's alpha method. This number was 0.87, which indicates the reliability of the questionnaire.

Finally, structural equation modeling method and Smart PLS software were used for data analysis.

## RESULTS

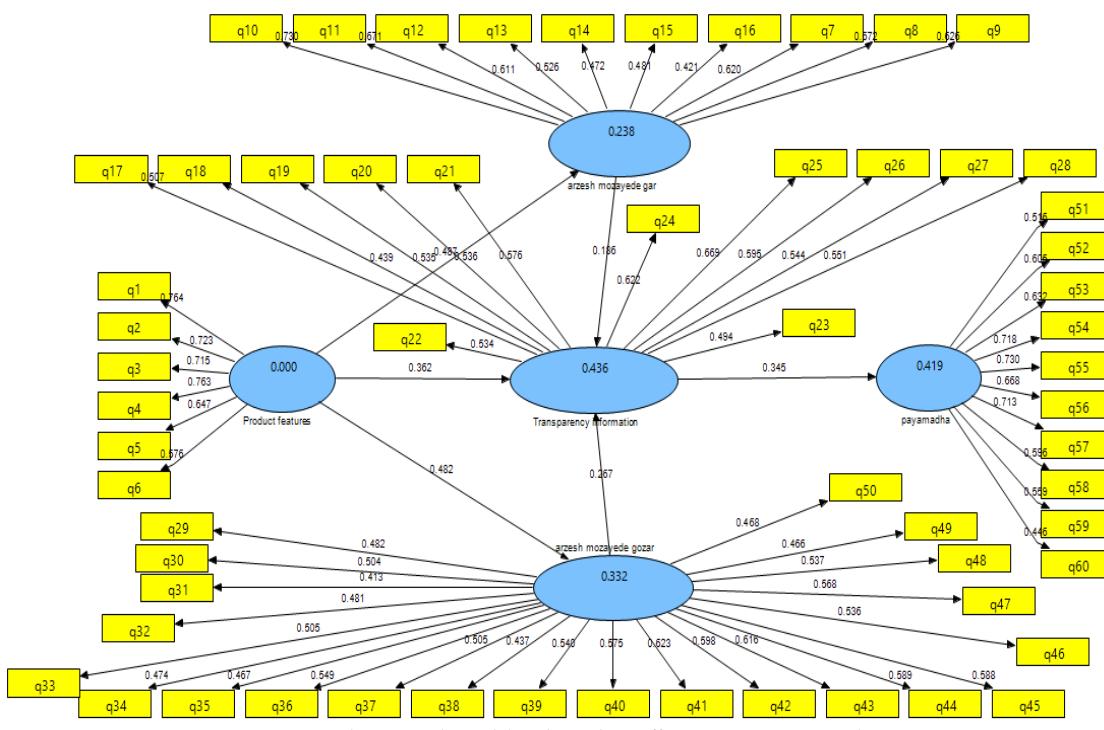
In order to analyze the internal structure or in other words the validity of the questionnaire and discover the constituent factors of each hidden variable, the confirmatory factor analysis (CFA) tool was used. The factor loadings related to each of the constructs or research questions were significant at the 95% confidence level. Therefore, the studied constructs have high validity in terms of validity. In addition, with the help of factor loading, it is possible to say which index or item has a greater contribution to the measurement of its hidden variable. Any questionnaire item or question that has a higher factor load has a greater power or

contribution in measuring the related hidden variable. According to the results of the confirmatory factor analysis, all items or questions of the questionnaire have acceptable validity, and in fact, the factor loadings related to each of the items or questions of the research were significant at the 95% confidence level.

After checking the fit of the measurement models and ensuring the accuracy of the measurement tool, it is time to check the goodness of the structural model. In fitting the structural model, the fitting of hidden variables and their relationships with each other is investigated.  $R^2$  criteria are used for this. GOF criterion is used in the general fitting of the model.

**Table 1.** Determining the Overall fit of the Model

Variables	Communality	$R^2$
<b>Characteristics of product</b>		--
<b>Transparency of information</b>	0.59	0.436
<b>Auctioneer's values</b>	0.50	0.238
<b>Customer's values</b>	0.54	0.332
<b>Consequences</b>	0.57	0.419
	0.61	



**Figure 2.** The Research Model in the Path Coefficients Estimation Mode

The test result for the model fit index is 0.447. Since the minimum acceptable value for this index is 0.36, it can be claimed that the research model has a high and strong fit. After checking the state of the research measurement tool, according to the PLS software algorithm, it is time to test the research hypotheses. At this stage, first, the significance coefficients of Value-T related to each of the research hypotheses are examined, and then, using the coefficients of the standardized factor loadings, the influence of the hidden variables either exogenous or independent variables are discussed on dependent or endogenous latent variables.

In the research model, both estimation modes of the path coefficients and the significance of the path coefficients ( $t$ -value) are shown in the following and in the test

section of the hypotheses of the research corresponding to the hypotheses respectively in the respective graphs. In the mode of coefficient estimation, the model shows the path coefficients of each of the research hypotheses and the factor loadings of each of the items or questions of the questionnaire. The model shows the significance of each of the coefficients of the hypothesis path in the case of significance of the coefficients or the  $t$ -statistic. In fact, with the help of the model in the estimation mode of the path coefficients, it is possible to obtain the path coefficients between hidden variables and the path coefficients between manifest and hidden variables (factor loadings). In the significance mode, the model also shows the value of the  $t$  statistic related to each of the hypotheses to test the significance of each of the

hypotheses. The interpretation of factor loadings in the measurement model analysis section and the interpretation of path coefficients and t-statistics are also fully described in the hypothesis testing section of the

research. In figure 2 and 3, the research model is shown in the mode of estimation of path coefficients and t-statistics.

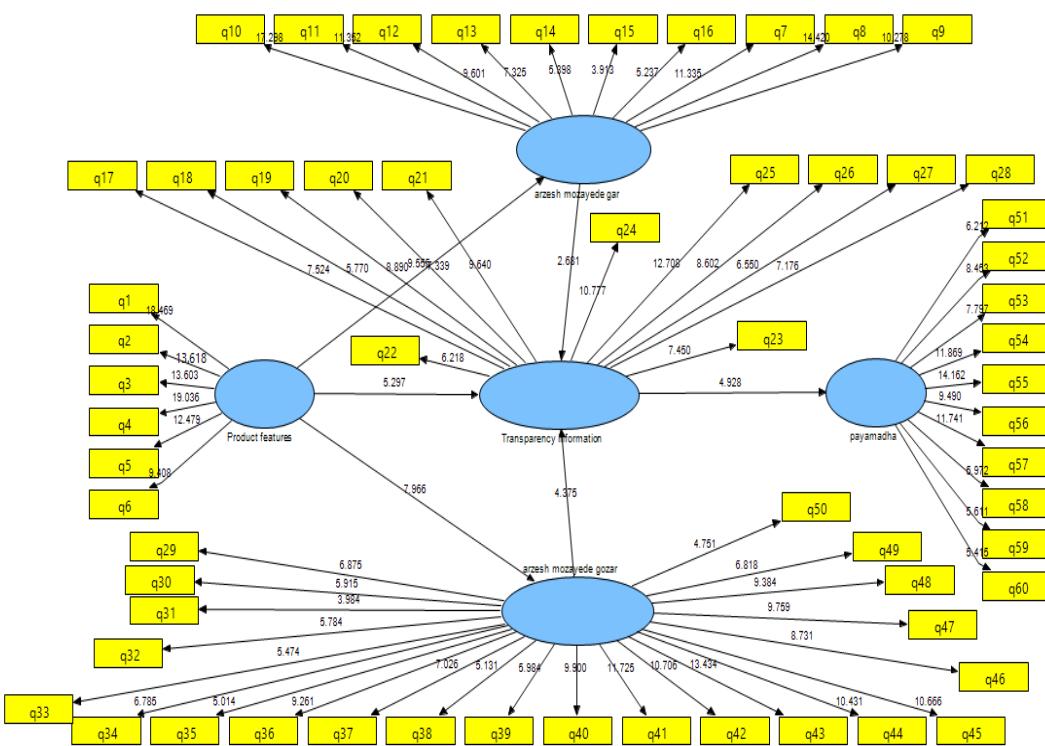


Figure 3. Research Model in Meaningful Mode

Table 2. The Results of the Research Hypothesis Test

Hypothesis	Path Coefficient	T-Value	Result
Product features are related to information transparency	0.362	5.376	Approved
The perceived value of the auctioneer is related to the transparency of information	0.186	2.440	Approved
Customer perceived value is related to information transparency	0.267	4.159	Approved
Product features are related to the perceived value of the auctioneer	0.487	10.102	Approved
Product features are related to customer perceived value	0.482	7.467	Approved
Transparency of information is related to results	0.345	4.833	Approved

The path coefficient in the relationship between product features and information transparency is equal to 0.362, which is equivalent to 36.2%, which indicates a direct relationship between product features and information transparency, which means that the increase or decrease of product features affects the increase or decrease of information transparency. According to the t-value which is equal to 5.376 and is outside the range (+1.96, -1.96), therefore it can be said with 95% confidence that the characteristics of the information transparency product have a significant positive effect, in other words, the hypothesis of the effect of product characteristics on information transparency is statistically accepted (p-value<5%).

The path coefficient in the relationship between the perceived value of the bidder and the transparency of

information is equal to 0.186, equivalent to 18.6%, which indicates a direct relationship between the perceived value of the bidder and the transparency of information, which means that the increase or decrease of the perceived value of the bidder depends on the transparency of information. It is effective according to the value of T-value which is equal to 2.440 and it is outside the range (+1.96, -1.96), so it can be said with 95% confidence that the perceived value of the auctioneer on the transparency of information in the form Significance has a positive effect, in other words, the hypothesis of the effect of the perceived value of the auctioneer and the transparency of information is statistically accepted (p-value<5%).

The path coefficient in the relationship between the customer's perceived value and information

transparency is 0.267, equivalent to 26.7%, which indicates a direct relationship between the customer's perceived value and information transparency, which means that the increase or decrease in the perceived value of the bidder depends on the increase or decrease in transparency. Information is effective according to the value of T-value which is equal to 4.159 and is outside the range (+1.96, -1.96). Therefore, it can be said with 95% confidence that the perceived value of the bidder on the transparency of information is as follows: The significance has a positive effect, in other words, the hypothesis of the effect of the customer's perceived value and information transparency is statistically accepted ( $p$ -value<5%).

The path coefficient in the relationship between the product features and the perceived value of the bidder is equal to 0.487, which is equivalent to 48.7%, which indicates a direct relationship between the product features and the customer's perceived value, which means that the increase or decrease of the product features depends on the increase or decrease. The perceived value of the auctioneer is effective according to the value of T-value which is equal to 10.102 and is outside the range (+1.96, -1.96). Therefore, it can be said with 95% confidence that the product's characteristics affect the perceived value. The auctioneer has a significant positive effect, in other words, the hypothesis of the effect of product characteristics and the perceived value of the auctioneer is statistically accepted ( $p$ -value<5%).

The path coefficient in the relationship between product features and customer perceived value is equal to 0.482, equivalent to 48.2%, which indicates a direct relationship between product features and the perceived value of the bidder, which means that the increase or decrease of product features on the increase or The decrease in the perceived value of the customer is effective according to the value of T-value which is equal to 7.467 and is outside the range (+1.96, -1.96). Therefore, it can be said with 95% confidence that the product features affect the perceived value. The auctioneer has a positive effect in a significant way, in other words, the hypothesis of the effect of product features and customer's perceived value is statistically accepted ( $p$ -value<5%).

The path coefficient in the relationship between transparency of information and consequences is equal to 0.345, which is equivalent to 34.5%, which indicates a direct relationship between transparency of information and consequences, which means that increasing or decreasing the transparency of information has an effect on increasing or decreasing the consequences, according

to the value of T- value, which is equal to 4.833 and is outside the range (+1.96, -1.96), so it can be said with 95% confidence that information transparency has a significant positive effect on outcomes, in other words, the hypothesis of information transparency and outcomes is statistically accepted ( $P$ -Value<5%).

## DISCUSSION

Auctions can provide more reliable information about the competition than negotiations. There is no need for the bidders to trust the bidders in knowing the bids submitted by the other bidders. While corrupt side deals, collusion, and bid rigging may occur in auctions, they are more easily disclosed and tracked than other types of transactions [11]. Transparency is the fastest, least expensive, simplest, most basic and most reliable mechanism for fighting corruption (both in preventing and detecting crime), increasing responsibility and accountability, promoting meritocracy, active and effective public participation, Establishing justice and eliminating unfair discrimination, reducing cost and time, and as a result increasing efficiency and social capital. Transparency eliminates rents. Because the projects and actions will be public, access to them will be free and competitive for everyone, the results and achievements of the projects will be presented publicly, and the opportunities will be distributed naturally [12]. New technologies (especially information and communication technology) play an important role in realizing transparency. The main application of these technologies can be seen in the power of technology in the wide distribution of information (access and depth), removing time and place barriers, and its power in gathering and organizing the opinions and contributions of the general audience [13]. In the meantime, the development and application of information technology with the aim of establishing electronic government is the beginning of a new phase in the life of public sector management, and governments are trying to take an important step towards the information society by establishing it. In fact, information technology is considered as one of the revolutionary new technologies in recent years and has various capabilities. One of its functions is to create transparency, and it has been used as an enabler in various fields, including the field of e-government development, and has led to transparency [14].

The results obtained from the point of view of academic and e-business experts and e-auction operators and led to the extraction of core codes, investigated categories, research hypotheses and their confirmation with

statistical tests, show that transparency information in electronic auctions is the most important element in electronic auctions and is of great importance for the auctioneer and the auctioneer and has a direct relationship with the characteristics of the product in the auction and its consequences. These results are consistent with the results of some researches [15, 16]. Finally, the results of the research led to the extraction of the research model, which is unique and fundamentally different from the models presented in the conducted researches, and is presented as the first model under the title of information transparency in electronic auctions. It is suggested to examine the strengths and weaknesses of the electronic auction infrastructure in terms of hardware and software. It is suggested that in order to protect the information of bidders and protect their rights, the level of security and security threats and the possibility of intrusion in the systems used in electronic auctions should be investigated.

## CONCLUSION

Transparency of information as a basic principle in professional ethics may causes strengthens trust, attracts customers, fair competition and reduces the doubt of the

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auctioneer towards the actions of the auctioneer and the holding of electronic auctions and it brings perceived value to the customer. It causes a fair opportunity and security of information as a perceived value for the auctioneer, and the intended consequences and results to provide the interests of the beneficiaries (reducing the cancellation of bids, increasing the satisfaction of the auctioneers, preventing and eliminating collusion in the auction, saving time and cost (and organization) increasing productivity, eliminating the costs of sending supervisors to monitor in the traditional way, streamlining organizational processes, specialization of organization operations, electronic and long-term storage of auction information, quick access to information and records of previous auctions ) provides.

## ETHICAL CONSIDERATIONS

Ethical issues (such as plagiarism, conscious satisfaction, misleading, making and or forging data, publishing or sending to two places, redundancy and etc.) have been fully considered by the writers.

## CONFLICT OF INTEREST

The authors declare that there is no conflict of interests.