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## **TOWARDS UNDERSTANDING THE FACTORS THAT AFFECTING THE ONLINE BIDDING IMPLEMENTATION: BASED ON GROUNDED THEORY METHOD**

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### **Abstract**

The purpose of this paper was to investigate the influential factors toward online bidding implementation in governmental bidding departments in Jordan. This paper has used the grounded theory method (GTM) to generate a theory of online bidding implementation in the context. The main tool of data collection was open ended and in-depth interviews.

The theory that it is presented in this research is divided into one core category, which is online bidding implementation, and six sub-categories, which are (electronic trust, financial resources, information technology infrastructure, perceived risk, importance of the product, laws issues) and six hypotheses have been formed.

According to the data which were collected and analyzed, many departments just start now to recognize the benefits of online bidding implementation. The respondents complain from the lack of electronic trust in terms of efficiency, privacy, security, and e-service quality. Moreover the results indicated that the utilization of online bidding will help to share the information, in real time, it is considered as the way of task efficiency,

by reduce the cost. Finally, it was found that Perceived risk has a direct impact on decision maker's attention to apply the online bidding system, and they are connecting the utilization with the importance of products.

**Keywords: Online Bidding System, Electronic Trust, Grounded Theory Method, Jordan, Governmental Bidding Departments, Information Technology Infrastructure.**

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## **GENERAL BACKGROUND**

The internet and the exponential growth of electronic commerce have been changing the way of business is conducted, including procurement in markets, purchasers can choose to conduct bid solicitations and negotiations online or offline via traditional methods [1]. In spite of the importance of online biddings as a new e-commerce operating model, few studies have investigated the factors affecting its applications. In addition, Tassabehji [2] said that, online bidding system is still in the early stages and there remains a dearth of substantial empirical research and much more to uncover. So that, online bidding web sites are becoming increasingly more important as an intermediary for both sellers and buyers [3].

## **ONLINE BIDDING SYSTEMS**

All of transactions are conducted via one of three mechanisms; which are a posted price, a negotiation process, or bids [4]. They found that online biddings, become into a new trading model based on the network for the exchange and bid technology, that have some new features and mechanisms compared to traditional bids in terms of time and location constraints; in more details it should be more free, more flexible, more efficient, as well as lower operating costs and participation costs for bidding. However, online bidding allows significant cost savings and the increase in standardization and automation helps prevent corruption and creates transparency, contract security, and enhanced quality [5]. The so-called materials bidding and tendering is that the materials suppliers which provide a variety of qualified materials can be introduced into enterprise interior, through the reasonable structure and guide, additionally orderly competition, and finally be chosen by the enterprise to provide materials of high quality and the superior price under the condition of market competition completely [6].

According to Wirtz, online bidding is the integration of network-based information and communication technology to support operational and strategic activities that are required to supply the necessary inputs which, are not self-created by the organization. Adding, Bessler et al. [7] presented a novel evidence for the success of different bidding strategies in international mergers and acquisitions. On the other hand; Aibinu et al. [8] said that online bidding developers and promoters need to use test project cases to

monitor, measure, and document the benefits of online bidding; they suggested that perceived barriers, cost, the perceived benefits of online bidding and security concerns are the factors influencing willingness participate in online bidding with perceived barriers being the most significant influencing factor. Also, Bessler et al. [7] announced that, a higher percentage of cash payment also increases the probability of success in bidder contest. Chiou et al. [9] show that both system and contact of e-service quality of the online bidding web site do not influence buyers' and sellers' overall satisfaction.

Online bidding system is a special type of negotiation mechanism that generating a very competitive environment, the tool has received praise for lowering inventory levels, increasing access to new markets, allowing better information transparency, attaining price visibility and increasing competitiveness and efficiency of purchasing [1,10]. Adding that a larger number of bidding suppliers contributes to a successful and more competitive auction event [11].

Leśniak [12] revealed a group of factors which affecting the decision to participate in a tender such as; the type of works; past experience, contract conditions; the possibility of subcontracting, the need for special equipment; the difficulty of the work. Also, found that the intention to use online bidding are composed of perceived benefits (usefulness), perceived costs (searching cost, monitoring cost, and adapting cost), and perceived value, but expert and non-expert differ in their perceptions of the value of online bidding. But, Chiou et al. [9] focused on the e-service quality of the online bidding with regard to fulfillment, responsiveness, compensation, and contact has significant impact on the intention of implementations.

The other researchers discussed the reputations of sellers in online bidding, which are typically measured by feedback ratings provided by other market participants, the buyers, and these ratings can provide signals that reduce information asymmetry and build buyers' trust in sellers [13,14]. On the other hand some researchers compare online auctions and offline procurement along the dimensions of purchase importance, supply market availability, future orientation and item specification difficulty, and they indicate that offline procurement is more likely to be chosen when the purchase is highly important [1]. Moreover, Hamer [15] investigated the actions that should be taken to reduce risk perceptions of online buyers and the ability of these actions to induce online buyers to participate in online bidding. The hidden information problem is exacerbated in e-commerce situations because of the relative anonymity of online merchants. In fact, Clemons [16] argues that the hidden information problem threatens to destroy the online bidding marketplace.

In an attempt to separate the risk associated with the product from the risk associated with the seller [15]. Etzion et al. [17] presented a model that use of posted price and open-bid auctions. Adding, Lee [18] tried to explore the relationships between a demander's bidding strategies and negotiation efficiency under different order and competitive conditions. Also, Hamer [15] explored the manner in which these types of information increase or decrease buyers' propensities to engage in the bids and the

amount buyers are willing to pay; adding, he attempt to separate the risk associated with the product from the risk associated with the seller. Yen and Lu [19] were focusing on the information technology infrastructure, they found that the correct technical functioning of the site and availability of assistance, such as call center or question and answering. An inquiry functions are both fundamental and basic and an auction web site. The other focus on the request for quotation (RFQ) is a detailed description of what an industrial buyer wants to purchase, usually including specifications and requirements related to quality, quantity, delivery, terms and conditions, supply market availability ...etc. [1]. Adam et al. [20] found that the affective images and regulation influencing bidding behavior in online auctions. Leśniak [12] said that the factors influencing bidding decisions are to a considerable extent dependent on the market and the environment in which a company operates. In addition, Cui et al. [21] identified bidding strategies empirically in online single-unit auctions and evaluate their outcome in terms of cost saving, perceived bidder enjoyment, and bidder satisfaction. Moreover, Li et al. [22] proposed the main requirements for successful online bidding, which are bidding privacy, strong anonymity, secret bidding prices, enforceability, verifiability, non-repudiation, traceability, one-time registration and easy revocation.

## **GROUNDING THEORY METHOD**

The grounded Theory Method (GTM) has been mentioned by Glaser and Strauss in 1967, it is systematic and at the same time flexible guidelines for collecting, coding and validation of data that may help to interpretive a phenomenon of interest as attempts to build a Grounded Theory (GT), which consist of abstract conceptualizations of substantive problems that people experience [23,24]. Moreover, (GTM) encourages the researchers to be more interpretive and inductive, rather than seeking to test and validate hypotheses, also, taking into account different perspective and experiences of participants [24]. So that individuals are the main players in this type of research they provide meanings to their behaviors and actions. The theory building process occurs via recursive cycling among the case data, emerging theory, and later extant literature [25]. Grounded Theory (GT) is built upon two key concepts: constant comparison (no separation between data collection and analysis) and theoretical sampling (envisages decisions).

### **Problem Statement**

The application of online bidding strategy supporting coordination among government and business partners, improving the quality of ordering and purchasing decisions, provide quantitative tools to find the joint optimal policy and help in contract negotiations, promote cooperation between the buyer and the supplier, information sharing, cooperation, and cost optimization. Even though of these good impacts there is a little data that discuss the online bidding systems in developing countries, particularly in Jordanian governmental bidding departments. In other words, the bidding and tendering for purchase materials are more and more along with the rapid development of national economic construction. From the view of some situation, the problems

existing in bidding cannot be ignored [5]. So that the researcher decided to point up the factors, that cause the poor application of online system in the context.

*To start with, the researcher is trying to answer the following main question:*

***What are the Factors that Affecting the Online Bidding Implementation in Governmental Bidding Departments in Jordan?***

## **RESEARCH METHODOLOGY**

The research method adopted is qualitative research that used the grounded theory method (GTM), which is described as “adequate” and efficient” way to obtain the type of information required and to contend with the difficulties of an empirical situation and to generate a descriptive and explanatory theory of the online bidding system implementation. Data collection and the analysis process were conducted simultaneously, because the researcher used GTM. Data were collected through face-to-face interviews, open-ended questions and semi-structured interviews. The interviews were analyzed through the coding process which is defined as a vital link between data collection and developing an emergent theory to give an explanation to these data [26].

### **Research Sample**

Respondents were selected based on theoretical sampling in which we believe that those elected can contribute to the substantive area of the study, at the same time they are considered as field professionals. Selected sampling method uses the convenient. Respondents were selected from a group of employees who were able to provide information on research topics. Studies were conducted to achieve theoretical saturation when the number of respondents who are reached 21 participants comprising 11 administrators, and 10 employees from governmental bidding departments in Jordan. Adding that, Izvercian et al. [23] consider the constant comparison and theoretical sampling together with coding (whereby data is broken down into component parts which are given names) and theoretical saturation, the most important tools of ground theory [27].

### **Data Collection**

To achieve the objectives and answer the research questions set, we used i.e. interviews as the main methods of data collection, were conducted using a set of open ended and in-depth interviews questions, which we developed as a guide for initial questions before going to the general question of existence based on the responses. In other words focus on data to collect by on-going interpretation of data and emerging

conceptual categories). Interview sessions were conducted at various locations in accordance with the requirements of the respondents and typically took between 30-1.30 minutes depending on the time available to respondents. In addition to the interview memos, were also recorded for the researcher to reflect on the perceived situation and the concepts developed.

## **Data Analysis**

Grounded theory methods were used during the process of data analysis. We started with writing memos after each interview was conducted, and after a while, patterns emerged and the memos could be categorized according to indicators, incidents, concepts, and categories. According to Glaser, writing memos is a core process in grounded theory study. Ideas emerge during the coding process, data collection, and analysis as well as relationship codes that exist in theory during the process of writing the memo. Codes and categories that were formed according to our own synthesis based on emerging patterns. This is different from the common qualitative method based on the analysis of themes that have been formed earlier. The data was then analyzed using substantive coding involving open coding and selective coding. The constant comparative method was run simultaneously in which we compared incident to incident, incident to concept, and concept to concept. Each concept that emerged was compared to other concepts. All of these processes were compared with each other to see the emergence of concepts that eventually formed the core categories of the study. Moreover, selective coding have been used, as Strauss et al. [28] said, requires the selection of the focal core code; that is, the central phenomenon which has emerged from the axial coding process. Finally, the researcher tried to connect and explore the relationship between categories and their properties to develop the hypotheses leading to a theory, which is called theoretical coding, as Charmaz [27] confirmed that, is a conceptualization of how the substantive codes may be related to each other as hypotheses to be integrated into theory.

## **THE THEORY EMERGING PROCESS**

In this research the coding process was kept open from the begging. The following examples are key points from interviews and indicate the incidents that were identified and given a code. Some examples of key points and codes from the data about the online bidding system implementation in the context: note that A<sup>\*</sup>, B<sup>\*</sup>, C<sup>\*</sup>, D<sup>\*</sup>, E<sup>\*</sup>, F<sup>\*</sup>, G<sup>\*</sup>, H...etc. refers to the interview numbers; in other words, A<sup>\*</sup> refers to the first interview, B<sup>\*</sup> refers to the second interview, and so on. The numbers 1, 2, 3...etc. refers to the number and arrangement of the key point; for example, A<sup>\*</sup>1 means the key point number one, related to the integration, is from the first interview which has been given the symbol A<sup>\*</sup>, and soon (Table 1).

Some Examples of Key Point's Incidents and Codes		
Codes	Some examples of key point's incidents and codes	ID
Online bidding	"I prefer to use the <i>online bidding</i> because I think it is the best choice, I believe I did the right thing when I used the <i>online bidding web</i> ".	C 1
New purchasing process, online bidding system.	"Our <i>new purchasing processes</i> are requested through <i>online bidding system</i> ".	C 9
Online bidding web site	"I would use the <i>online bidding web site</i> ".	
Online bidding web, information and communication technology infrastructure	"We should develop our <i>information and communication technology infrastructure</i> to use <i>online bidding web</i> ".	C 14
Online bidding, satisfaction	"I am <i>satisfied</i> with the decision to use the <i>online bidding</i> ".	A 2
Technical skills, online bidding web, lot of time to understand	"I need more <i>technical skills and a lot of time to understand</i> how to use an online auction web".	B 3
Efforts and time, Online bidding	"I have to spend a lot of <i>efforts and time</i> to get used to the <i>online bidding</i> ".	F 18
Information technology infrastructure (Networking, internet, management information systems...etc.).	"We always try to develop our <i>information technology infrastructure</i> such ( <i>Networking, internet, management information systems...etc.</i> )".	A 11
Laws and regulations, applications of online bidding	"There are laws <i>and regulations</i> to ensure the <i>applications of online bidding</i> ".	F 7
Important goods	"Sometimes we want to pursue traditional or face-to-face <i>negotiations</i> when <i>important goods</i> are purchased".	C 9
Real time without delay.	"An <i>online bidding</i> help us to receive the goods in <i>real time without delay</i> ".	C 18
Purchase is highly important.	"Offline procurement is more likely to be chosen when the <i>purchase is highly important</i> ".	B 22
Obligation of specifications and standers.	"The implementation of <i>online bidding</i> increase the level of obligation of <i>specifications and standers</i> ".	G 11
E-government website	"Our online bidding offerings are often <i>advertised</i> through <i>e-government website</i> ".	E 3
Employs technologies, online bidding.	"The government always <i>employs technologies</i> to manage	F 19

	<i>its online bidding".</i>	
Financial sources, Information and communications technology.	"We don't have sufficient <i>financial sources</i> to employ good <i>Information and communications technology</i> ".	A 21
Quality of telecommunications services, online bidding implementation.	"The <i>quality of telecommunications services</i> contributes the growth of <i>online bidding implementation</i> ".	G 28
Improved coordination and information sharing between all of our units	"Electronic bidding system utilization <i>improved coordination and information sharing between all of our units</i> ".	A 30
Depend on supply chain integration, supply chain management system	"The successful online bidding <i>depend on supply chain integration and supply chain management system</i> ".	G 30
More quickly, easy, and low cost.	" <i>Online bidding</i> is better than face- to- face purchasing, it is more <i>quickly, easy, and low cost</i> ".	D 5
Support and automate all of purchasing and bidding processes, software of purchasing financial, marketing	"It is <i>an effective system</i> that is designed to <i>support and automate all of purchasing and bidding processes</i> , that includes a variety modules and <i>software of purchasing financial, marketing.....etc.</i> "	D 19
processes, software of purchasing financial, marketing	" <i>Implementing of electronic bidding system</i> leads to more <i>transparency and sharing data</i> to improve the performance such as <i>saving times, quality</i> "	E 8
Efficient security system	" <i>Efficient security system</i> for all of system users according to its authority"	H 18
Access data quickly and more transparency "	"By using online bidding the user <i>can access data quickly and more transparency</i> "	E 22
Focuses on coordination of purchasing processes, improve our relationships with suppliers	"Online bidding system implementation <i>focuses on coordination of purchasing processes</i> . More it <i>improves our relationships with suppliers</i> ".	K 11
Information readily available for the suppliers	"This government makes <i>information readily available for the suppliers</i> ".	E 17
Accurate description of the product	"We depend upon the buyers to provide an <i>accurate description of the product</i> ".	K 13
Confidence in our suppliers	"Our activities are instilling <i>confidence in our suppliers</i> ".	G 25

**Table 1:** Some Example of Key Points about Online Bidding Implementation in the context.

After that, the researcher revisited the data and analyzed and compared all the key points to see if similar codes occurred often and grouped them together under the same concepts (Figure1).

<b>Concepts</b>	<b>Labeled Codes</b>
Online Bidding	New Purchasing Process; Online Bidding System; Spot Auctions; Applications of Online Bidding; Online Bidding Implementation; Forward Trading; Support and Automate All of Purchasing and Bidding Processes; Implementing of Electronic Bidding system; Focuses on Coordination of Purchasing Processes; Forward Auctions; Improve our Relationships with Suppliers; Selling Strategies for Online; Interactive Bidding Strategy; E-Procurement; Continuous Combinatorial Bids.
Information Technology Infrastructure	Quality of Telecommunications Services; Online Bidding Web Site; Technical skills; Information and Communication Technology Infrastructure (Networking, Internet, Management Information Systems,...etc.); Technology Environment; Web-Based Data Mining; Website design Networking Reliability; Web Assistance; E-government Website; Software of Purchasing Financial; Marketing; Employs Technologies; Auction Hosting Web Site; Internet Networking Readiness; System Quality; Visual Appeal; Functionality of the Interaction; IT Communications Performance;
Security	Efficient Security System; Weak Security; System Reliability; Prefer Using Document Paper; Sufficient Security.
Time	A lot of Time to Understand; Efforts and Time; Real Time without Delay; Saving Times; Lack of Real-Time Decision; Time for Completing the Works.
Laws and Regulations	Laws and Regulations; Obligation of

	Specifications and Standers; Specifications and Standards; Law Side (Issue); Sourcing Authority.
Importance of the Product	Important Goods; Purchase is Highly Important; Item Specification Difficulty; According to Product Nature; Uniqueness.
Financial Sources	amount of money, its is an investment, do not have enough money, need high maintenance cost Putting high prices for all its services.
Cost Reduction	Cost Effective; Shipping Cost; Perceived Value; Pricing Strategy; The Final Price of Auction Items; Cost of Sellers to List the Auction.
Transparency	Clear procedures; Information Readily Available for the government and Suppliers; Accurate Description of the Product; Information Flow, Clear payment Methods.
Quality of Services	Continuous Availability; Services Flexibility; Service Reliability; Responsiveness of Our Requirement; Difficult Service Location; Service Using Quality; Services' Channels; Expectation Confirmation; Time for Response; Electronic Negotiations. Payment methods, Service availability.
Trust	Trust-Enhancing Strategies; Confidence in Our Suppliers; Service Trust; Auction Network Trusts; Confidence in our Suppliers; Trust-Enhancing Strategies.
Risk	Reducing Buyers' Perceptions of Security Risk; Reducing Online Buyers' Perceptions of Risk Prices; Insurance.
Information Sharing	Improved information sharing between all of bidders, they can access quickly, integrate all the purchasing activities, Sharing Data, Hidden Information.
Information Characteristics	Information Readily, Accurate Data; Information Flow; Relevant Information; Public Information; Sufficient Information; Clarity.

**Table 2:** Some examples of concepts from the labelled codes about the online bidding implementation.

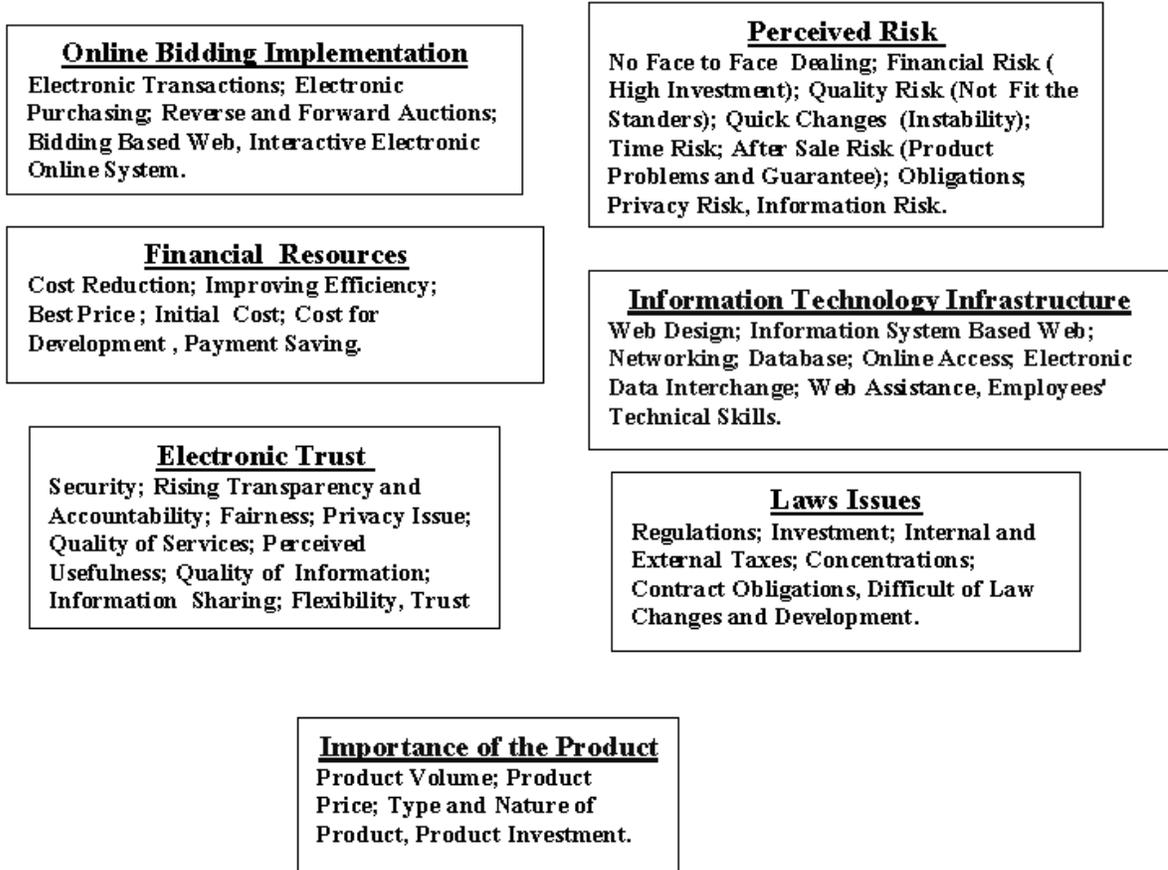
Technical Skills of		Administrative		Trust-Enhancing Strategies	
Satisfaction	Selling Strategies for	Clarity	Product	Hidden Information	
Procurement		Specifications and		Confidence in our	Equity
Qualified Service	Auction Network Trusts		Item Specification Difficulty	Shipping Cost	
Communicate With the		Web Assistance	Insurance	Minimum Bid Increment	
Perceived	Easy to Use	Political and Regulatory	Customizatio	Sharing Data	
Credibility	Government -Government Interaction			Electronic Negotiations	
Pricing	E-procurement	Dynamic Pricing		Transaction Cost	
Item Specification	Agreements with Service Providers			Trading Network	
Cost Effective	Justice	Maximizing the	Information Processing	Security System	
Auction Network		Auction Hosting Web		Distance	IT System Reliability
Security/Privac	Uniqueness	Ease of Use	Current	Time Length	
Request for	Item Specification	Lack of Real-		Information Security	
Denationalization	Information/ Service	Effort		Quality of Goods	
Satisfaction and	Purchase	Current Commodity Prices		Each Time Point	
Networking	Reserve Price	Website	Depend on Supply	Starting Price	
Online Bidding	Certification of	Information Transparency	Online Auctions Web Sites		
Positive Experience	Automate all of Purchasing and Bidding			Cost of Sellers to List the Auction	
Reserve Price	Time for Completing the Works	Access Data	Online Bidding Software		
Laws and	Flexibility	Electronic Trust	Implementing of Electronic Bidding System		
Information	Opportunity Cost of the Commodities'		Obligation of Specifications and Standers		
Seller Differentiation	Accurate Description of the		Unit Price Contract		
Negotiation	The Final Price of Auction		Information Sharing Between all of our Units		
Quality of	Interactive Bidding		Purchase is Highly Important		
Relevant Information	Easy to Implement		Reducing Buyers' Perceptions of Risk		
The Seller's Utility of the Auction of Goods		Possibility of Obtaining an Advance Payment			
Certification of	Hidden Reserve Price	Information Technology Infrastructure			
Reserve Price	Evaluating user	E-government	Law Side (Issue)		
Financial	Willingness to	Public Information	Auction Network Trust		
IT/Internet Readiness	Web-Based Data Mining	New Purchasing	Supplier Relations		
Administration	Efficient Security	Supply Chain	Improved Coordination		

**Figure 1:** Some examples of concepts.

Some examples of concepts from the labeled codes about the online bidding implementation in the context (Table 2).

Accordingly, the researcher labelled all the concepts in Figure 2 which were coded in the categories and their properties.

**Initial Categories and the Theoretical Concepts**



**Figure 2:** Grounded theory result (Categories and their Theoretical Concepts).

**THE THEORY**

The core category (Online Bidding Implementation), sub-categories (Laws Issues, Electronic Trust, Financial Resources, Information Technology Infrastructure, Perceived Risk, Importance of the Product), will be described and explained including the framework for the new theory (Figure 3).

The core hypotheses which resulted from the theory generation process are:

**Hypothesis 1:** There is a statistical significant effect of the Information Technology Infrastructure on the Online Bidding Implementation.

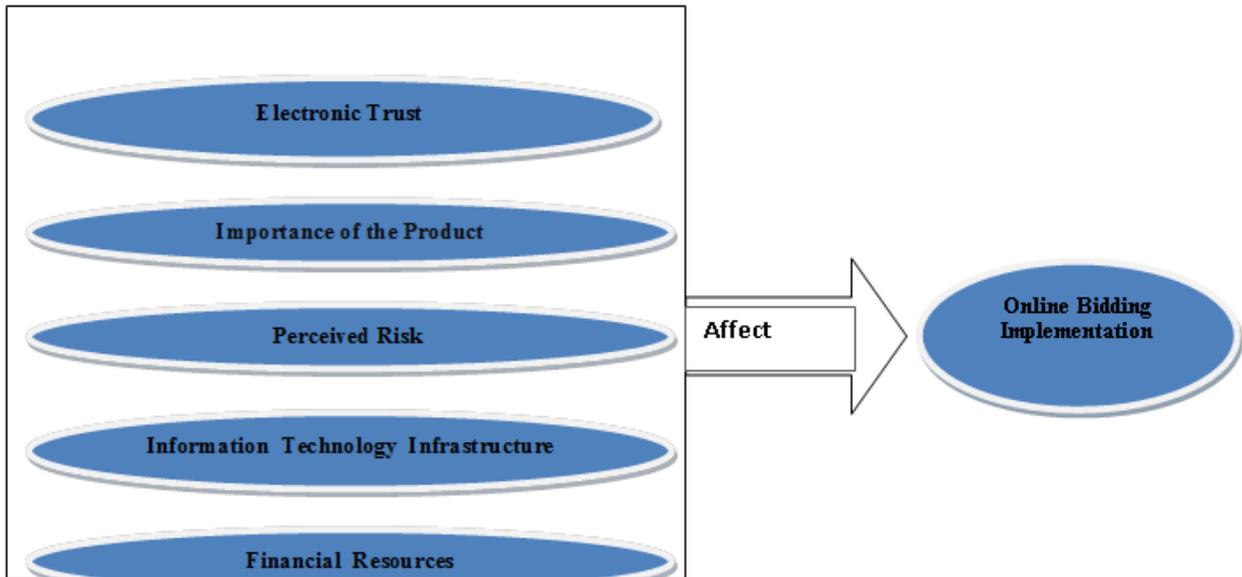
**Hypothesis 2:** There is a statistical significant effect of the Electronic Trust on the Online Bidding Implementation.

**Hypothesis 3:** There is a statistical significant effect of the Importance of the Product on the Online Bidding Implementation.

**Hypothesis 4:** There is a statistical significant effect of the Information Laws Issues on the Online Bidding Implementation.

**Hypothesis 5:** There is a statistical significant effect of the Financial Resources on the Online Bidding Implementation.

**Hypothesis 6:** There is a statistical significant effect of the Perceived Risk on the Online Bidding Implementation.



**Figure 3:** The Simple Framework of the Theory.

The core category, which is the *Online Bidding Implementation*: is characterized by many theoretical concepts, that are presented as the dimensions of a new approach of purchasing and selling processes that can be used by the governmental purchasing department, performed electronically and can be described as interactive electronic online system; reverse and forward auctions; bidding based web.

The *Electronic Trust* sub-category is characterized by many theoretical concepts that is refers to the users' expectation that the website presents sharing quality information, quality useful services, and the user find fairness; transparency, accountability; flexibility; and respecting of security and privacy by dealing with online bidding system.

The *Importance of the Product* sub-category is characterized by many theoretical concepts that is determined by the nature and type of the product, and the amount of investment, price, perceived value and risk of transaction, also the need of product involvement, and interesting in reading detailed information about the product/services and the willingness to compare product characteristics with other product, product brand, finally, focusing on the time length of purchasing.

The *Perceived Risk*: sub-category is characterized by many theoretical concepts that generate negative attitude towards online bidding, which come from the no face to face dealing, financial risk (high investment), quality risk (not fit the standers), quick changes (instability), time risk, after sale risk (product problems and guarantee obligations), privacy risk, information risk.

The *Information Technology Infrastructure*: sub-category is characterized by many theoretical concepts, which refers to the availability of the technological tools that is necessary for online bidding implementation such as; electronic data interchange; qualified web design; information system based web; networking; database and employees' technical skills; ...etc.

The *Financial Resources*: sub-category is characterized by many theoretical concepts that refers to the government ability to meet the online bidding requirements such as initial investment in technology tools, and development of infrastructure, at the sometime focusing on cost reduction, best price and payment saving.

The *Laws Issues*: sub-category is characterized by many theoretical concepts that refers to the availability of a set of laws, rules, regulations, concentrations and legal issues that it could support or hinder the trade transactions, and it needs changes and development accordance to quick development of technology environment like Investment law, internal and external taxes, contract obligations, external trade dealing, external agreements.

## **RESEARCH FINDINGS**

Based on the analysis of qualitative data the researcher found that recently governmental bidding departments are implementing online bidding system for some products, the adoption was as a dents claim that, there are a part of start implementation of electronic government program since 2002. The response continuance intention of online bidding system implementation, that present great improvements in coordination between all of the activities of purchasing and selling processes, and aiming to make a replacement of traditional processes.

The results of this study confirm that the implementation of online bidding system is influenced by many factors; one of them is electronic trust of an e-government web site

with regard to efficiency, privacy, security, and e-service quality. The respondents complain from the lack of electronic trust, in more details; fear from the information security and privacy, so that the different governmental departments is still fearing from electronic transactions, which is considered an important and core dimension of electronic government. The respondents said that:

***"If we find e-services quality of web site would encourage use to adopt of online bidding".***

Adding, the respondents confirmed that the utilization of online bidding will help to share the information, in real time, it is considered as the way of task efficiency, by reduce the cost. The respondent said that:

***"Its main objective of transformation to electronic government is the reduction of all the cost, particularly e-procurement system investments and maintenance cost, at the same time we need training cost for our employees".***

Based on data, which is analyzed; the researcher concludes that there are a set of laws and regulations that can grant and protect and electronic transaction, but there are no effective application of it. There are no sufficient punishments for cheating processes. Moreover, the respondents affirmed that there are no regulation culture of government and citizens in general. So all of them asked for effective implementation of laws and regulations. This result agreed with Adam et al. [20] and Leśniak [12] findings.

The financial resources is the main barrier of online bidding, which is needed for initial information technology infrastructure investment, even though some of governmental bidding departments are equipped with developed online bidding software, electronic data interchange, networking, fire records management systems, data management program, enterprise business applications program, geographic information systems program, decision support system, public safety communications support program, municipal court records management systems, external interface applications, database management information system...etc. This finding is similar with multiple studies such as Bessler et al. [7] and Yen and Lu [19].

The respondent said that:

***"We are thinking the availability of financial will increase the using of online bidding, an information technology infrastructure as well".***

***"We and our partners must focus on the information technology infrastructures, giving more attention to the web design, ensuring the security of credit card payments and privacy of shared information for all of dealers".***

also, based on data analyses, it was found that Perceived risk has a direct impact on

decision makers attention to apply the online bidding system, and they are connecting the utilization with the importance of products in terms of its value, the amount of investment, payment, and the quality requirements. This result the same with Ma'ruf et al [29-35].

Finally, the researcher found that is more studies are necessary in order to confirm the proposed grounded theory [35-40].

## **RESEARCH CONTRIBUTION**

The value of this research derives from the following:

- There is a lack of studies that focus on Online bidding in general in Arab countries, especially in Jordan. As a result, this research serves as being a good starting point for future research projects and studies [41-44]. Moreover, this research study can also be used as a reference and help in providing other researchers beneficial information and a clearer direction when embarking on future research projects relating to online bidding in governmental bidding departments in Jordan.
- The findings of this research mainly to the theory (detection the factors that influencing online bidding system application in the context) that is proposed, This theory is grounded on the empirical and real data that was collected from the field, by using an open -in depth interviews to generate the data that is related to online bidding system application in the context.
- These findings contribute to deepening our understanding of the online bidding system application.
- Because of lack of available studies in developing countries, this could be considered as a significant contribution to the knowledge at academic and practical levels. Moreover, this research may represent a starting point for further researches to cover other issues that are related to online bidding system (which are not discussed in this research).
- The importance of this study comes from the utilization of the systematic method which is Grounded theory method in the context. Because it is considered as difficult and not a popular method generally in developing countries.

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