THE ROLE OF PUBLIC PROCUREMENT IN THE DIGITALIZATION OF THE ECONOMY AND ADOPTION OF E-COMMERCE

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One of the important directions in digitizing economic processes is the need to introduce modern information technologies and e-commerce systems into the public procurement system. The aim of the study is to analyse the stages of digitalization of the public procurement system. The commodity exchange plays an important role in the effective functioning of the public procurement system. The study determined the role of the trading platform, its organizational and legal forms and functions in public procurement through the commodity exchange. The article describes in detail the process of placing an order at the stage of public procurement, as well as the process of fulfilling a contract by a supplier. The article describes the procedure for organizing tenders, the conditions and procedure for participation in tenders. The article provides some suggestions for further improving the public procurement system: development and implementation of a national classification of goods (services) in the public procurement system that meets international and national standards; an increase in the number of operators working in the public procurement information portal system, and, consequently, an increase in the competitive environment, etc.

**Keywords:** state procurement, digitalization, exchange, trading platform, broker, lot, customer

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Роль государственных закупок в цифровизации экономики и внедрении электронной торговли

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Одним из важных направлений цифровизации экономических процессов является внедрение систем электронной коммерции в систему государственных закупок. Целью исследования является анализ этапов оцифровки системы государственных закупок. Определена роль торговой площадки, ее организационно-правовых форм и функций при осуществлении государственных закупок через товарную биржу. В статье подробно описывается процесс оформления заказа на этапе государственных закупок, а также процесс выполнения контракта поставщиком. Отмечается, что процесс государственных закупок является нормальным бизнес-процессом, которому присущи риски. Полное или частичное несоблюдение договорных условий в сфере государственных закупок может привести к неэффективному использованию средств государственного бюджета. По этой причине целесообразно ввести систему гарантий, комиссионных платежей и рассрочек для государственных закупок через товарную биржу. При организации системы государственных закупок с помощью электронной торговли практика деления приобретаемых товаров на лоты позволяет снизить риски и сократить расходы. В статье описаны порядок организации тендеров, условий и порядок участия в них. Даются предложения по дальнейшему совершенствованию системы государственных закупок: разработка и внедрение национальной классификации товаров (работ, услуг), соответствующей международным и...
Introduction

Each area must be regulated and governed by perfect, popular and strong laws and regulations. An area governed by strong and comprehensive laws and regulations will certainly demonstrate development and growth. Nowadays, much attention is paid to reforms of public procurement. As this sphere is a highly demanding field of modern information technologies, it requires development and constant improvement of normative documents in accordance with the modern requirements [1]. At the current stage of development of the world economy and deepening of the globalization process, the public procurement system is at the second stage of development [2, 3]. The main reason for this is the digitalization of the state procurement system, its exclusion from dependence on the shadow economy [4], and the unhindered participation of small businesses for which it is difficult to withstand the competition in free trade.

Body

The purpose of the research is to analyse the main stages of digitalization of state procurement system and to develop directions for its development [5, 6].

The authors widely employed such methods as grouping theories related to research, modelling in making conclusions made upon research results, statistical analysis, systematic approach, forecasting and generalization methods in the article [7].

The successive development of small business and private entrepreneurship, providing favourable conditions for them can be considered a new stage in further liberalization of the economy carried out by the Government of Uzbekistan [8, 9]. In order to expand the participation of small enterprises in the public procurement system, the Government established a legal framework for this system and is constantly improving it. For example, in 2011, the Presidential Decree on optimizing the public procurement system¹ was adopted; based on it, the Law² was adopted in 2018; in 2019 the Decree on the Protection of Private Property³ was adopted; a draft law on public procurement is currently being developed.

Uzbek Commodity Exchange (UzEx) is the Commodity Exchange of the Republic of Uzbekistan, the operator and owner of the electronic trading system of the exchange, which coordinates and manages trading floors, as well as providing clearing services. UzEx was founded by the Decree⁴ of the President of the Republic of Uzbekistan in 1994 and operates in accordance with the legislation of the Republic of Uzbekistan, the Law on the Commodity Exchanges and Commodity Exchanges Activity, the procedure for trading at the Commodity Exchange of the republic of Uzbekistan and internal regulatory documents [10].

In order to create favorable conditions for the further development of small business and private entrepreneurship, it is planned to carry out a number of tasks and functions on public procurement

¹ Resolution of the President of the Republic of Uzbekistan of July 00, 2011 No. PQ-1475 “On optimizing the public procurement system and expanding the participation of small businesses in them”
³ Decree of the President of the Republic of Uzbekistan of August 13, 2019 No. UP-5780 “On additional measures to strengthen the protection of private property and guarantee the rights of owners, radically improve the organization of work to support entrepreneurial initiatives, as well as expand the access of business entities to financial resources and production infrastructure”. URL: https://lex.uz/ru/docs/4473205
⁴ Decree of the President of the Republic of Uzbekistan of February 28, 1994 No. UP-772 “On the abolition of the Uzbek State Joint-Stock Association for Contracts and Trade “Uzkontrakttorg” and the establishment of the Uzbek Republican Joint-Stock Association of Wholesale and Exchange Trade “Uzoptbirzhetorg”. URL: https://lex.uz/com/docs/195982
of UzEx. It organizes electronic bidding for public procurement of goods and services included in the appendix to the Presidential Decree:

- purchase of educational supplies (except for educational materials);
- paper and other printing products;
- overhaul and average car repair;
- overhaul and maintenance of residential and non-residential premises;
- computer rental, computing and audio-video equipment;
- operation and maintenance of residential and non-residential premises;
- car maintenance and repair;
- maintenance and repair of furniture and office equipment;
- maintenance and repair of computer, computing, audio and video equipment;
- operation, maintenance and repair of other machinery and equipment.

To accomplish these tasks, UzEx assumes the following functions:

- Exchange – ensures the implementation of new, improved, open and transparent public procurement mechanisms through electronic trading;
- Participation of bidders and observers in an open and transparent auction prevents corrupt contacts and relationships.
- Provides greater participation through the access to the Internet.

The activities of brokers deserve special attention in these tasks. A broker is a member of a stock exchange that deals on behalf of a client. At the same time, brokers are clients and stock exchange traders, in addition to the Clearing House.

Brokers have a number of requirements because of their high responsibility. First of all, they must meet the level of professional training and qualification issued by UzEx and have a professional certificate issued by the State Property Committee of the Republic of Uzbekistan.

The relationship between a client and a broker is carried out on the basis of an assignment agreement or a commission one. Upon entering into the agreement, the broker is obliged to inform the client about the procedure of participation in exchange trading, including the rules of exchange trade and commission fees for brokers and exchange services. After accepting the client’s assignments, the broker must fulfill the obligations of the contract as soon as possible. During the assignment, the broker may not disclose the client’s name and account number [11]. The broker is obliged to inform the client of the transactions made on the client’s behalf in due time. The clients have the right to request information about their personal account from (sub-account) UzEx.

During the first stage of implementation of the mechanism of state procurement, brokers are tasked with providing services to their suppliers [12].

Small businesses and business entities on the one hand and budget organizations which implement state procurement on the other hand work through brokers, and the brokers provide them with all the help they need under the legislation [13, 14]. The brokers are expected to assist the suppliers with registration and with acceptance orders to participate in the sale.

A trading floor is very important for trading activity through the exchange. UzEx trading floors are legal entities that operate on the basis of a contract. They undergo the process of UzEx accreditation and organize the participation in electronic exchange and exhibition-fair trades and will provide contract registration services. The main purpose of the trading floor is to organize participation in exchange and exhibition fairs in order to assist organizations and enterprises in purchasing material and technical resources and goods, and selling their products.

The main functions of the trading floor are:

- providing exchange and exhibition-fair bidders with the access to UzEx single electronic trading system through computer terminals of the trading floor;
- providing advisory and consulting services to brokers and clients of the trading floor;
registration of domestic, import and export contracts concluded as a result of exchange and exhibition-fair trades;
• information services to participants of exchange and exhibition-fair bidding;
• providing other bidders with other services.
Trading floors are created by legal entities of various organizational and legal forms and various forms of ownership at their own initiative. An applicant organization methodically manages the UzEx trading floor it applied for and bidders while also providing clearing services [15].
The request of the applicant organization and the agreement signed between the it and UzEx grants the status of UzEx trading floor and the related powers, rights and obligations. Applicant organization must confirm financial and property proportionality of UzEx trading floor, satisfactory material and technical base and qualification of personnel.
In the first stage of implementation of the mechanism of state procurement, the trading platforms provide services to customers, that is, public and budget organizations. A customer may address the nearest trading platform and get assistance from the trading platform registrar on all trading matters.

Figure 1. Relationship Scheme

The ordering process at the first stage of state procurement:
• A “Customer” addresses the nearest Trading Floor or a “Broker” attached to it.
• The “Broker” and the “Customer” sign a standard assignment contract.
• The “Broker” takes authority of an “Agent” and acts on behalf of the “Customer” in the system.

The ordering process at the second stage of state procurement:
• A “Customer” addresses an “Agent” accredited on the Exchange or places a representative on the Exchange.
• The “Agent” acts on behalf of the “Customer” in the system.

At the first stage of public procurement, the supplier in the process of the order:
• A “Supplier” selects an appropriate “Broker” through the web-site www.uzex.com.
• The “Broker” and the “Supplier” sign a standard contract.
• The “Broker” acts as an “Agent” on behalf of the “Supplier” in the system.
At the second stage of public procurement, the supplier in the order process:

- A “Supplier” applies to an “Agent” accredited on UzEx, or places a representative on UzEx.
- The “Agent” acts on behalf of the “Supplier” in the system.

Here’s the order to access and use the Trading System Portal. Access it through the State Procurement Information Portal, then on the portal home page push a large green button with the GZ symbol (in Russian) or DX (in Uzbek).

Orders are provided in the prescribed manner under the following circumstances:

- Budget organizations are required to make purchases through the e-commerce system, when goods and orders range from 300 to 100,000 US dollars.
- To participate in the tender, you can contact an agent accredited on UzEx. The agent places an order or places information on suppliers of public procurement.
- At the first stage, the task of accredited agents is performed by brokers of UzEx.

State procurement is a commercial process, and there is some risk. For example, buyers or sellers of goods may refuse to perform agreed contracts [16]. In addition, the preparation of contracts, their legal reconciliation and coordination with various agencies of the exchange require certain actions and costs from the brokers [17]. If the effectiveness of the time and money is guaranteed to a certain extent by the seller and the buyer, applying to UzEx is in vain and the costs listed above are salvaged [18]. In order to guarantee this process, a part of the contract is anticipated to be paid in advance. If the payment is made, the guarantee amount will be taken into account during the settlement process.

- The budget organization places 0.15% of the amount specified in the agreement as a guarantee, and when the transaction is complete, this amount is used as the exchange and brokerage commission.
- The supplier places its guarantee in the amount of 3%. Upon conclusion of the agreement, the commission is 0.15%.

In the public procurement system, these funds are used as a guarantee for trade. This is reflected in the sample receipts on the information portal.

Goods purchased by organizations are usually distributed in lots. The way a lot is structured is an important concept for the organizers and suppliers participating in the trade. Proper allocation of lots allows suppliers to significantly reduce prices and meet demand [19]. Brokers should explain to clients the procedure for dividing the goods into lots. If the organization needs repairs, and it is planned to obtain construction, finishing and other materials from the supplier, it is advisable to divide the material into separate lots and place the repair service as an individual lot as well. The greater the number of lots, the lower the cost may be.

It is inappropriate to conclude that by breaking bigger lots into lots with the value below $300 they become unpurchaseable through e-commerce. Electronic bidding for such lots is not prohibited. Of course, if the purchase price is too low, there is a risk the sale costs will not be covered. In other words, it is more economically feasible to limit such trade in order to avoid damage to exchanges and brokers.
It is advisable to consider the share of brokers and exchanges when doing the calculations.

- The commission of the organization of the bidder and the supplier, that is, both parties, is 0.15%, of which 0.1% goes to the broker and 0.05% to the exchange. Commissions are deducted from the guarantee amount.

- The broker and the stock exchange receive funds automatically and there is no need to transfer them.

Commission incomes should cover all costs of exchanges and brokers, depreciation charges for buildings and various fixed assets, utilities, taxes, internet and all other expenses.

Customer and Supplier Organizations must register participants in the list of exchange to carry out state procurement through the exchange.

- Customers’ data are already in the system, and a broker carries out transactions with them through the “customer account management” system.

- Suppliers are registered on iPAY.uz and UZBEX.COM systems. Accounts on state procurement systems are derived from these systems.

Upon completion of the contract, the broker provides the client with an excerpt of the sales record with a seal of brokers of both parties, the details of the participants of the transaction, with a seal of small business product sales centre and maculariat of the commodity exchange of the Republic of Uzbekistan [20]. Then the supplier and the buyer interconnect independently to complete the process and transaction calculations.

Participation in tenders worth more than 100 thousand US dollars is carried out in a different manner. In order to participate in tenders, suppliers must familiarize themselves with the list of tendering procedures on the Public Procurement Information Portal.

An application for participation in a tender can be submitted in accordance with the tender procedures. In addition, in case the applicant is previously registered it is possible to get relevant documents for participation in tenders online. It is possible to get necessary information providing the login and password.

Given that public procurement is an area that needs continuous improvement [21], in order to ensure the convenience of participants in public procurement, the page of the online store of the special information portal now leads to a page of the national store (for budget customers miliydodon.uzex.uz, for corporate customers emiliydodon.uzex.uz), where local customers can make purchases from local manufacturers (manufacturers of products, provision of services).
In order to improve the mechanism of payments in the public procurement and create amenities for participating in electronic bidding, a mechanism for early transfer of funds for the operator’s service to the clearing house was introduced.

The Government strives to ensure transparency and further improve the public procurement system. Aiming to ensure and increase targeted and efficient use of funds of business entities and enterprises of strategic importance, as well as widespread involvement of business entities in the public procurement process from January 1, 2020 in accordance with the Decree of the President, business entities and enterprises of strategic importance place announcements on a special information portal on public procurement not later than fifteen days from the date of receipt of proposals by the selection committee before bidding by selecting the best offers. The protocol of the procurement commission on the selection of the best offers must be placed on the day of its official adoption on a special public procurement portal and remain there for two business days for public discussion.

To prevent the participation of enterprises that were declared bankrupt, liquidated or in provisional liquidation, and whose activities were prohibited, the integration of software systems of the special portal of public procurement with tax and other relevant bodies was ensured.

To further improve public procurement, it is advisable to carry out reforms in the following areas:

1. Development of standard forms for public procurement plans, announcements, tenders, contracts, and minutes of procurement committee meetings to ensure uniformity of public procurement documents.

2. Development and implementation and continuous improvement of the national classifier, which combines all the characteristics of goods (services) in accordance with international and national standards; adoption of guidelines for the development, maintenance and continuous improvement of the classifier; creation and implementation of a catalogue of goods (works, services) for public procurement based on the classifier.

3. Digitalisation of tender procedures in order to improve the system of application of modern information technologies in public procurement processes, as well as to increase transparency and transparency in the sector; adoption of guidelines for electronic tenders, the introduction of amendments and additions to the relevant regulations.

4. Encouragement of competition among operators of a special information portal on public procurement, resulting in a further improvement in the quality of services provided by the portal to the public procurement participants.

Conclusions

In conclusion, the gradual introduction of the state procurement system in order to ensure the efficient use of public funds in the conditions of modernization of the economy is beginning to yield positive results.

At present, ensuring competition between the government procurement trading platforms that operate in accordance with regulations and have equal opportunities is important in digitizing the economy.

Ensuring the integration of public procurement trading platforms with the relevant software packages (Public Finance Management Information System, Information Program of the State Tax and Statistical Committees of the Republic of Uzbekistan, etc.) is a strategic task that should be undertaken in the near future.

We believe that developments involving experts in this field, scientists, researchers, practitioners, consumers of the national classifier of products and services, which includes all the characteristics of products and services in accordance with international standards, should be defined as one of the important tasks.

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1 Decree of the President of the Republic of Uzbekistan of January 22, 2018 No. PP-3487 “On measures to support the activities of business entities and enterprises of strategic importance”. URL: https://lex.uz/ru/docs/3515545
It is necessary to effectively use the capabilities of the Training Centre under the Ministry of Finance to organize training for specialists in the field of public procurement, as well as attract lecturers from leading countries and national universities for distance education.

To convey the essence of public procurement to business and the public, it is important to encourage various meetings and workshops, as well as promote their widespread media coverage.

It should be noted that this study has several limitations.

Firstly, the data on public procurement in terms of expenditures of the budget recipients are not always in the public domain and such a situation could create some distortion in the studied dependencies.

Secondly, the unstable supply of electricity and poor Internet connection in some remote areas of the country does not allow the full-fledged operation of the electronic exchange trading system, which in the end can significantly affect the practical significance of this study.

**Directions for further research**

In the near future, deepening of digitization of the economy and coverage of all sectors of the economy will allow to link state procurement e-commerce system for budget organizations to the information system, while informatization of the cost and revenue system of the budgetary organizations will establish electronic links with the state finance system. However, the coherence and adaptation of these systems to each other has not been theoretically analysed. This will encourage further research in this area.

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