



BALTIC JOURNAL OF LAW & POLITICS

A Journal of Vytautas Magnus University
VOLUME 15, NUMBER 2 (2022)
ISSN 2029-0454



Cite: *Baltic Journal of Law & Politics* 15:2 (2022): 1569-1579
DOI: 10.2478/bjlp-2022-001102

Conceptual framework of Automatic Contracts a comparative study

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Received: August 14, 2022; reviews: 2; accepted: October 13, 2022.

Abstract

The contract is one of the most important sources of commitment in daily dealings. There is no doubt that the contract occupies a prominent and undeniable position in the stability of various transactions in all societies, and at a time when the law establishes the foundations and rules for organizing contractual relationships that seem fixed and stable, modern technologies are constantly evolving and their uses are being introduced. In various fields, as the field of information technology is witnessing great progress, especially in the management of automated information and the development of encryption systems, which are a tool of safety, guarantee and stability for the various transactions that take place through the use of networks and electronic means. A new type of contracts has emerged, called automatic contracts, which refer to an agreement between two or more parties that is encoded in a way that ensures correct implementation by electronic platforms, or through automated devices.

Keywords

Ethereum, Blockchain, Auto-executing contracts, Smart contracts

1. Introduction

1.1 Research Topic

Contract theory is one of the most developed areas in civil law. It is in consent development, the emergence of new models and techniques, especially in

the field of information, which seeks to reduce human participation by concluding new types of agreements without human intervention through programming. Automatic contracts are a good example of developing contracting procedures. Authors have been put many names for this type of contracts. For example, (Nick Szabo) called them smart contracts and became famous for this name, but they were criticized at the same time by the world itself, as they are not artificial intelligence contracts, but were given the name when compared to traditional contracts where the word "smart" is used because it automatically implements the pre-programmed steps. In addition, the name of this type of contracts gives the traditional contracts a negative concept, and also called them "blockchain contracts", but this label is also criticized as it refers to one Electronic platforms and there are other platforms for these contracts, such as the ether day platform, in other words, the conclusion of this type of contracts is not confined to the blockchain platform only until the name of this platform is launched There is a link to these contracts, and as some have called them automatic contracts, but this label is also criticized because it limits automaticity (which distinguishes these contracts) to execution only, while these contracts can be concluded automatically and executed automatically, and we found that the closest to the truth is Calling these contracts automatic contracts, contracts that are concluded and executed automatically without the need for the parties to meet to conclude this type of contract

1.2 importance Research

The importance of the research lies in the widespread spread of this type of contracts widespread spread in various areas of public life, far from traditional contracts and manipulation, and displaying them on electronic platforms.

1.3 Research objectives

The research aims to shed light on automated contracts in terms of:

- Explain the concept of automated contracts.
- Describe the types of automated contracts in their various forms-
- Determining the methods of concluding and implementing automated contracts

1.4 The research problem

The problem of the research lies in the lack of legal regulation of this type of contracts that explains to individuals, do the prevailing ideas in the general theory of obligations all apply to automated contracts? Do automatic contracts in some respects imply a departure from the usual rules in general contract theory? Is it concluded and implemented in the same traditional ways, or is it implemented in different ways?

5.1 The method

This study followed a comparative analytical approach by reviewing and analyzing legislative texts in the laws of different countries.

1.6 The Plan of Research

We dealt with the subject of conceptual framework of automated contract a comparative study through two requirements, the first is the definition of automated contracts, and the second is their forms as follows:

2 - contracts Definition of automatic (1)

It may be difficult to adopt a comprehensive conventional definition of the term automatic contracts, and perhaps the reason for this is due to the recent emergence of this term, and also the recentness of this type of contracts in terms of origin, as the emergence of this type of contracts was the result of the great informational progress in the field of digital technology. Therefore, this requirement will be divided into two branches, the first for the legislative definition, and the second for the legal definition (Nkuda, 2021; Nugba, 2021).

2.1 The Legal definition

Automatic contracts are relatively recent contracts, so we find a few legislations that I have known because of their modernity, in addition to the fact that setting tariffs is the task of jurisprudence and not the legislator, and where the use of this type of contract has spread and flourished in some countries and the United States of America, which prompted legislators to define. This type of contract and the amendment in the legislation concerned with electronic transactions in order to recognize the probative value of these contracts, starting with reference to the unified federal law, we find that the automatic contract is not known, except that it is some state laws Illinois State Law for the year 2018 and in the second article, if I knew this type. Of the contracts as (the contract that is stored as an electronic record and which is verified using the blockchain) (2), as well as the law of the state of Nevada, as the automatic contracts were defined by the 2017 amending law of the Unified Electronic Transactions Act (UETA) in Article (9/2) as (contracts. They are stored in an electronic template (3), and we note through the above definition the explicit recognition of automatic contracts as contracts.

This law, in addition to recognizing automatic contracts, also recognized recordings or signatures stored in electronic platforms (4) and recognized their strength as evidence in evidence and also encouraged them by exempting this type of transaction from taxation and also from obtaining a license (5)

Referring to French and Emarat laws, it has not been directly defined by automatic contracts, but through its recent amendment in 2016 to Decree 131 on contract theory, it has resorted to the recognition of digital technology and by

allocating legal materials regulating the contract concluded by electronic means, as article (1125) of it stipulates that "electronic means can be used to indicate the terms of contract or transactions for money or services."

It is stated that the French legislator provided a general provision applicable to all types of contracts concluded by electronic means, where he referred through the text to the means used for contracting, thus all contracts concluded through the use of electronic means will be subject to the same legal regulation, including automatic contracts that use electronic platforms as an intermediary to conclude and execute contracts, as well as by referring to the sales machine, which is also considered as an intermediary for contracting and concluding automatic contracts.

The UAE Law No. (1) of 2006 on transactions and e-commerce, in accordance with article 2006, provides for the definition of the automated electronic intermediary as (a program or electronic system of the information technology medium that automatically operates entirely or partially without the supervision of any natural person at the time of the work or response to it) and also defined automated electronic transactions (as transactions concluded and implemented in full or in part by electronic means or records which are not These works or records are subject to any follow-up and review by a natural person(7)

From the above we conclude that the electronic broker may be computer systems (such as electronic platforms) or devices (such as the vending machine) and through which the will is expressed where contracts are concluded through the vending machine - devices selling goods - by programming the terms of the contract and this amounts to a response directed to the public by specifying the essential conditions of price and sale

In reference to Iraqi law, although automatic contracts are not completed, it has kept pace with the development in the field of ICT in response to the development of lifestyles in various fields and passed the Iraqi Electronic Signature and Electronic Transactions Act No. (78) of 2012, and referring to some articles of this law we find that it regulated the definitions of some aspects of electronic transactions agencies

Article (1/VI) of it (electronic transactions: requests, documents and transactions conducted by electronic means)

Article (1/VII) electronic means (electrical, magnetic, light, electromagnetic or other similar means used in the creation, processing, exchange and storage of information)

(1/VIII) Electronic intermediary (computer software or any other electronic means used to carry out a procedure or respond to an action with the intention of creating, sending or receiving information) (8)

We conclude through the three definitions above that included (requests, electronic means and electronic media) and since requests are an expression of will, and that it is through those devices, and the electronic broker is the most common program, but the Iraqi legislator did not define them.

2.2 Definition of automatic contracts in jurisprudence

Automatic contracts made according to the terms agreed upon in the contract. Over the past few years, a group of inventors began designing computer technologies that help contract parties to automatically conclude and implement their agreements according to pre-set conditions. With reference to American jurisprudence, the American jurist (Nick Szabo (9)

Automatic contracts are (contractual clauses embedded in hardware and software in a way that makes it very costly to hack) (10), and as Wattenhofer defined it as (an agreement between two or more parties encrypted in a way that ensures correct implementation) (11).

In the UAE jurisprudence, automatic contracts have been defined as (a contract that brings together two or more parties that can be programmed and then implemented automatically once certain events or predetermined conditions are achieved based on blockchain technology) (12), as well as defined as (contracts subject to a set of specific rules and standards). Which are implemented through its prior programming and do not need any intermediary, that is, without the intervention of a third party, meaning they are electronic understandings written using an electronic code by the computer, and they can also be considered as a set of instructions that are programmed electronically with advanced technology (13).

Iraqi researchers did not neglect trying to define this type of contracts, so we find some studies that dealt with the definition of automatic contracts, as some of them defined them as (computer programs on a decentralized public network in which we meet the will of the two parties in order to implement all the agreed terms automatically and can only be referred to by a program Another represents a new agreement (14)

And in turn, before we knew this kind of contract,

Auto-execution contracts are defined as (the agreement of two or more wills to create a legal effect that is implemented directly when the conditions specified by the parties to the agreement are met and these conditions match the code).

That is, this software code carries the agreement of two wills on the contract and the form of the contract and its implementation, i.e. the arrangement of the effects of that contract between the two parties, since the Iraqi legislator, according to the general rules in the theory of commitment, is the origin of all consensual contracts and did not specify a specific form of contracts or a specific way to conclude them as a general rule with the exception of formal and in-kind contracts which has a specific formality.

As for automatic contracts of conclusion and execution, they are defined as (contracts that are concluded and implemented voluntarily and voluntarily through electronic means such as machines selling goods or through electronic platforms, i.e. contracts that are concluded and implemented in the virtual world

through the blockchain platform), and since the contract is the source of all obligations under the theory of Sovereignty of will, meaning that the contracting parties are free to contract or not to contract, and just as automatic contracts (conclusion and execution) are like traditional contracts, they can respond to all services and things that are not out of the nature of dealing (15), and these contracts are based on when If this condition is fulfilled, a certain result will result.

3. Forms of Automatic Contracts

By extrapolating the authors who deal with these contracts, we can find several forms of automatic contracts that can be divided according to the angle from which we look at them.

3.1 Automatic contracts in terms of composition

Automatic contracts are divided in terms of formation into automatic contracts of conclusion and execution. In this research we will explain only Contracts of automatic execution.

3.1.1 automatic contracts of conclusion and implementation

The progress in the field of information has resulted in the emergence of a new type of contracts that are concluded and executed automatically without the need for the parties to meet face to face to conclude these contracts, and this form has several forms, namely:

1-Fully automated contracts: They are contracts that are made through electronic platforms without human intervention, whether in conclusion or implementation, and this form has two forms:

The first picture / contracts concluded from computer to computer (by prior agreement): In this case, the automatic contract is entered into and implemented entirely by a computer without human intervention, that is, the transaction occurs through previous commercial relations previously agreed upon between the contracting parties,

he second picture / contracts concluded from one computer to another (without prior agreement): The automatic contract in this case takes place without the intervention of any human element and without the existence of a previous agreement between the contracting parties,

In the two pictures above, the contract is made through a computer concluding the contract with the other computer, in light of the prior programming of all contract clauses.

2- non-completely automated contracts/contracts that can only take place with human intervention and its image is a contract from a human to a computer or vice versa, i.e. a contract between a computer and a natural person. On the other hand, decisions are made by a pre-programmed computer (16)

3.1.2, only automatic contracts

Automatically executed contracts mean that they are contracts based on original contracts concluded in a legally valid manner and include all agreements between the parties, provided that the implementation of the obligations of those parties is automatic without the intervention of any intermediary, and since these automatic contracts are not executed as soon as they are automatically concluded, but rather by the availability of the previously agreed conditions (17) Therefore, the automatic contracts do not replace the original contracts, but rather enhance them, as the automatic contract, which is the (ideal complement) of the original contracts, that is, it gives it digital power (18).

For example, as in those contracts that are concluded between the customer and banking institutions, and where they are agreed on the mechanism of executing those contracts automatically through those devices by entering the automatic debit cards, that is, when verifying those conditions in the original contract, those contracts are executed through those devices where they are These devices are either simple for cash exchange, or these devices are not simple, but are used for depositing checks and transferring balance between people, whether they are at the local or international level (19)

3.2 automatic contracts in terms of content

Automatic contracts are divided in terms of content into:

3.2.1 automatic specific contract.

They are contracts that do not require in their implementation information from a party outside the electronic platforms, which means that there is sufficient information within those platforms through which those contracts are held and implemented, for example, as in the case of a peer-to-peer betting game (lottery) funds are kept on Electronic platforms in the form of tokens, and at the end of the lottery game, the money is transferred to the winner's account via his address on those electronic platforms (20)

It can also be said that buying and selling through vending machines has specific conditions in terms of the thing sold and the currency to be paid, where the seller creates the automatic contract and programmed it, which once those conditions are met, the contract is executed and all of this is done automatically without the need for the intervention of the parties or the presence of intermediaries to ensure that the terms of the contract are implemented.

3.2.2 automatic contracts indefinitely

Undetermined automatic contracts, unlike the first type, are contracts that depend on information from outside the electronic platforms, that is, by relying on the external party (Oracle) (21), in order to provide those platforms with the

necessary information that is not found inside the electronic platforms and on which the contract depends, except that in In this case, we may face a problem that there is no guarantee of the correctness of the information provided by a third party, for example sports betting agreements where those electronic platforms cannot identify the team that won the match and therefore the participants must agree on a trusted third party (Oracle) to provide them with the outputs and so on The security of the system decreases to some extent to the credibility of the source providing the information to the platforms (22), It must be noted that automatic contracts have other forms, but they are less important than what was mentioned above. On the other hand, they may be either rigid, which are contracts that cannot be modified or canceled except by expensive procedures, or automatic flexible contracts, which are those contracts that can be modified and canceled easily and without Exorbitant measures are required (23), and this is either through correcting the automatic contract concluded through automated vending machines, or through the contracting parties entering into another automatic contract that is unlike the first contract in this case, that is, by correcting the automatic contracts, because in the original The programmed automatic contract cannot be modified after it has been published through electronic platforms. In this case, if the parties to the contract conclude a new contract that modifies the first contract, the contract can be described as flexible, but if the first contract is not modified by concluding the second contract that modifies the first, then the contract is rigid.

Conclusion

At the end of our research, we reached the following results and suggestions

1. Results

1. It turns out that there is no unified naming for this type of contracts, as there are many labels between smart contracts, self-executing contracts, blockchain contracts, encrypted contracts, digital contracts, but we preferred naming automatic contracts because they are done automatically when pre-set conditions are met
2. It became clear to us that there is no unified definition of automatic contracts, if the legislation and jurisprudence differ by setting a unified definition for it, and we ended up with a comprehensive definition, as we defined it as (contracts that are concluded between two or more parties in an encrypted form through various electronic means, whether through machines mechanism, electronic platforms, or any other means) 3- The scope of application of automatic contracts is not limited to one contract, whether it is sale, lease or insurance, but extends to unnamed contracts as well, as it is a new contractual type.

- 4- (Nick Szabo) is the first to refer to this type of contract, representing it with a vending machine, but although its first image is a vending machine, it has forms other than the last, as it is via electronic platforms (the most famous of which are the Blockchain platform and the Ethereum platform etc)
- 5- Automatic contracts are either automatic for conclusion and execution or automatic for implementation only. This is what one hand, and on the other hand they are either specified conditions within the electronic platforms or undefined conditions within those platforms but depend on the fulfillment of the conditions from outside those platforms.

2. the proposals

1. We suggest to the Iraqi legislator to amend the law on signature and electronic transactions to accommodate all modern methods of contracts, and in order to keep pace with this progress in the digital field, or to adopt new rules for automatic contracts in the theory of contract in civil law.
2. We call on the Iraqi legislator to formulate legal rules regulating the work of electronic platforms (such as the blockchain platform), after which it is one of the most important and famous platforms in order to take advantage of its multiple advantages in terms of reducing costs, accuracy, and speed in completing various transactions
3. The necessity of holding scientific conferences and seminars, as well as development courses for different groups, in order to introduce this type of new contracts, for which the practice experience of the employees has become very few.

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The dictionary of meanings is available on the electronic link (visit date 7/7 2022)

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