

The processing economy
without trust problems



LOHN
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Abstract

Mechanism of economic business at lohn

Lohn is a widely spread contractual form in various industrial fields of international cooperation relations, especially in the industry of clothing, footwear, furniture, machine building industry, electronics and appliance industry, food industry and petrochemical industry.

According to the specialist's definition, the processing in lohn system consists of an international economic business carried out on a contractual basis between two companies of different countries where one performs, for a retribution in cash or in kind, a custom-made product according to the designs, drawings, usually with raw materials and materials of the other companies, which keep their right to trade that product under its own trademark.

At present, the annual production achieved in lohn at the worldwide level exceeds 10,000 B \$.

Lohn, the custom-made production, is a simple form that can contribute to the advantageous mutual settlement of some international asymmetries related to the available workforce and the cost of workmanship, raw material demand or production capacities.

The custom-made product indicates two aspects:

- a) the finite product is performed with the raw materials and the materials of company that performs the order;
- b) the finite product is manufactured by processing of raw materials and the materials of company that requires the order.

Being about the finite products performed according to the client's indications and drawings and in the quantity required by him, the dispatch is 100% ensured.

The company that launches the order is called **buyer, importer** or **beneficiary**. The company that performs the product is called **exporter or producer**.

The buyers at lohn are companies that hold prestige marks. We may assert that the main goal for the buyer, followed by Lohn operation, is the valuation of capacities of some prestigious marks they benefit of, as well as the managerial and marketing ability.

The producers at lohn have the following specific trading aspects:

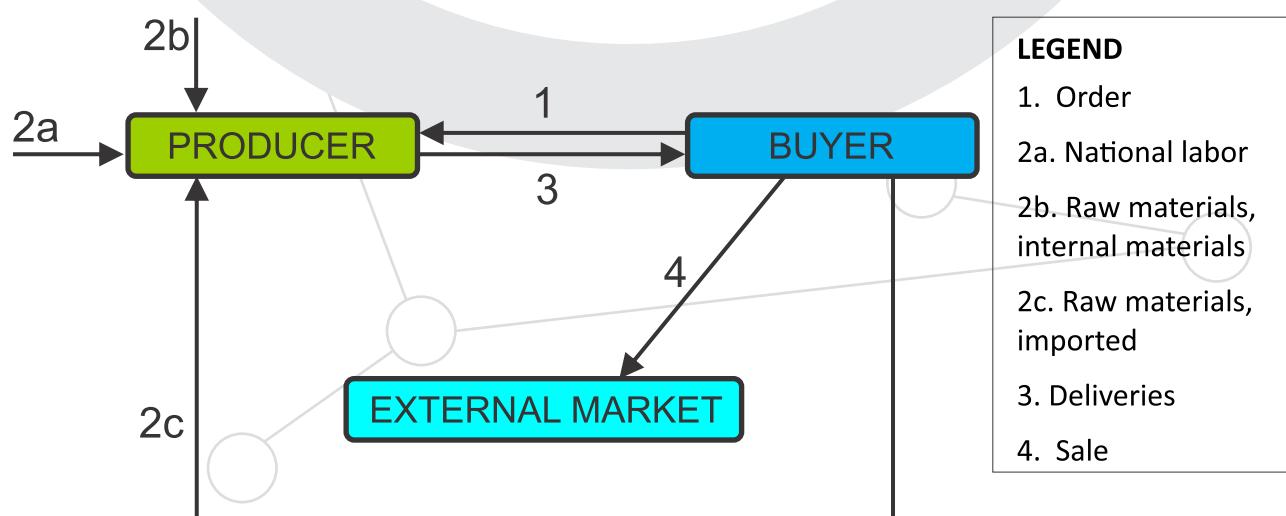
- they benefit of production factors, buildings, cars, utilities and especially workforce with a proper qualification;
- they do not have prestigious trademarks and are only focused on the industrial production side, exploiting the competitive benefits of the origin countries, related to the low cost of workforce and the low level of fees.

The international cooperation based on processing at lohn presents for the producer, the advantage that he is granted the possibility to fully involve in the manufacturing capacity and benefit, too, from the maximum exploitation of this capacity.

In his turn, the buyer is granted the possibility to send for processing the raw materials and materials to a country where the workforce is cheaper than in his own country and obtain products manufactured according to his own project and vision. It is noted that, for many times, the beneficiary makes the producer available, as rental or sale in the account of processing, certain machines, installations and devices that ensure a high labor productiveness and a high technical – qualitative level of the end product.

The lohn mechanism is equally simple and efficient for the buyer (Figure 1).

Figure 1. Processing mechanism at lohn



Thus, the buyer launches the order of product to the producer whom he requires the model, offers him the necessary drawings, usually raw materials, too, entirely or partially, accessories and possibly a special manufacturing know-how. All these items are stipulated by the agreement concluded between the parties, where there are also mentioned a set of clauses such as price at which the producer provides the finite product to the buyer, price that includes mainly the workmanship as asset. The agreement expressly stipulates that the product is performed under the buyer's trademark, who reserves the trading right on his own market and on the worldwide market.

Transport costs are also taken into account in the efficiency of a cooperative action such as custom-made production. The buyer will preferably turn to countries as close as possible to the outlets for the products ordered.

Depending on the buyer's involvement, one can talk about **active lohn** and **passive lohn**.

In the case of **active** lohn the producer processes the materials made available by the buyer and exports them to their owner. It also favors the import of technology, broadens the market, increases the qualification of the labor force, opens the perspectives of the cooperative actions. The buyer can also provide tools for finite products, can provide technical assistance in terms of qualification of the labor force or can be involved in organizing and improving the producer's activity.

Passive lohn is the opposite of the first, i.e. the buyer sends the materials that belong to it for processing in the producer's country and returns them in the finished form in its own country.

The major gap between labor costs in developed countries and emerging or poor economies makes lohn a major driver of the world economy for the next 50 years.

Performing lohn contracts through blockchain technology will bring important benefits in the future to both buyers and producers. The high transparency of these contracts will eliminate unregistered work as well as the exploitation of vulnerable persons or minors.

Blockchain technology in performing lohn contracts

Block-chain technology through smart contracts can bring indisputable benefits to lohn contracts because it secures on the one hand the buyer's investment that can control and truly manage the producers involved in the development of its products and, on the other hand, provides the psychological comfort required for the producer who, in compliance with the term of the agreement, will definitely receive its payment for the work carried out as soon as possible.

Producer's reputational risk management is one of the major concerns of buyers within a lohn contract because the latter give to producers, whom they know only from third-party references or under a contract governed by local laws, valuable raw materials having the uncertainty of manufacturing some products according to the required standards and at the deadlines stipulated in the contract. By registering with smart contracts each step of the parties within the lohn contract the block-chain technology will allow the achievement of a reputational profile of both the buyer and the producer. Thus each of the parties can choose the partner they are going to work with in full awareness.

Given that lohn contracts are usually performed in emerging countries with less predictable business law, it is very important to secure the relationship between the parties.

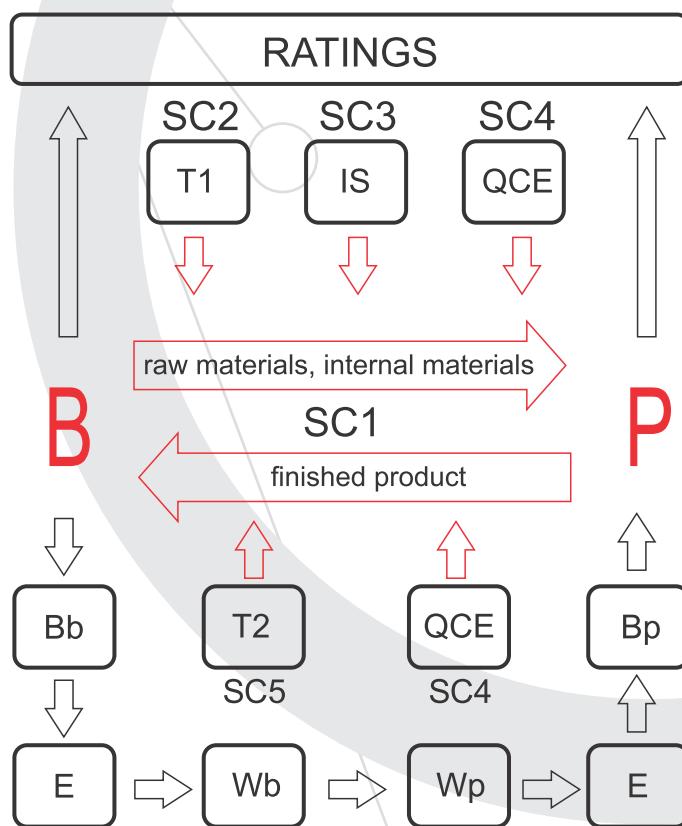
From the producer's perspective, the development of the production activity based on smart contracts will allow the optimization of production flows, the increase of the accountability of the factors involved due to the rigorous traceability of the product manufactured, the comfort of working with a buyer about whom there are honest and unquestionably accurate information and especially the speed of settlement of the labor provided within the contract.

All of these things contribute to a sustainable development of producers from emerging economies, to create a good reputation regarding compliance with the quality standards of the manufactured products and last but not least to transparency of human rights and work ethic observance for the persons employed by them.

The relationship between the main parties of the Iohn contract managed in block chain by smart contracts will create a relaxed business climate and the secondary actors such as carriers, quality control experts or internal suppliers will be able to contribute through other secondary smart contracts to the smooth performance of the main contract.

The economic discipline of each party involved will be guaranteed by the Smart Contract Rating System. Because as long as all the actors involved will have a general rating archived in the project, they will take care that their business reputation remains high.

Figure 2.



How does a lohn contract work in blockchain technology?

The contract between the buyer and the producer also involves third entities that lead to the completion in good conditions thereof. These are the carriers who deliver the raw materials and other goods required to achieve the production in the first phase, and then they pick up the finished products to deliver them to the buyer. Domestic suppliers of raw materials, related services and utilities represent another important category for the success of the production. Above all there are the quality control experts natural or legal persons, who follow on behalf of the buyer the entire production process, from the delivery of the raw materials, the quality thereof, supply or delivery times, the quality of the goods or services provided by the domestic suppliers, the timeliness of the deliveries or of the transportation of the goods and, in particular, the proper execution of the production by observing the buyer's technological indications.

The contribution of each of the involved parties is governed by IF/THEN-type smart contracts subordinated to the main contract between the buyer and the producer. Chaining and the proper execution of these complementary smart contracts lead in the end to a rigorous achievement of the main contract between the parties.

What are the concrete milestones to perform the smart contract in the block-chain (Figure 2)?

Example:

Buyer B concludes with producer P a lohn contract (governed by an IF / THEN-type SC1 smart contract) for the production of goods with a determined value.

In order to use the trading platform a buyer must have in the smart wallet a number of LOHN tokens equal to 120% of the value of the contract and to fill them permanently whenever the value of LOHN decreases with 10% at LOHNex request. This request is made by issuing a margin call or blocking in an escrow account an amount in an agreed coin currency representing the total contract value and transferring the LOHN token in the smart wallet to the lohncontrol tokens representing 100% of the value contract.

The number of LOHN tokens required to launch a call for tenders equivalent to the estimated contract value can be purchased by the buyer in two ways:

1. If the buyer holds all the funds necessary to make payments to all parties to the lohn contract, either buy LOHN tokens representing 120% of the value of the contract, or block the contract amount + 3% (trading platform commission fee) in a fiat currency (EUR, USD, or GBP) in an escrow account at the lohncontrol smart contract and borrowing the necessary token from third parties representing 100% of the contract value.

For this, the buyer specifies the usage fee to be paid to token owners for borrowing the token necessary to perform the contract, which will be paid at the final settlement of the price between the parts of the escrow account in one of the approved fiat coins or in the ETH, in a bank account or wallet from which tokens were transferred. For this situation, the token borrowed will be guaranteed with a corresponding portion of the amount of the asset in the escrow account.

If the buyer, after purchasing on the free market, already owns a sufficient quantity of LOHN tokens in his wallet, he will not have to pay any commission to borrow the tokens from third-party owners but just block into an account escrow at the lohncontrol smart contract of an amount expressed in a coin equivalent to the contract value of + 3% (trading platform commission) and in the smart wallet of the lohncontrol contract to transfer tokens representing 100% of the value of the contract.

At the same time, the buyer can drop the escrow account and transfer into the wallet al tokens representing 120% of the contract value, but must permanently fill them whenever the LOHN price drops by 10% at the LOHNex request made by issuing a call in margin.

2. If the buyer does not have the necessary funds to run the contract, he may request financing from interested token owners specifying a commission calculated per cent of the amount of token transferred to be paid for their temporary borrowing to the smart wallet of the contract.

The investors interested in running any smart contract lohncontrol understand and assume all the risks of their investment in return for the commission received. The attracted funding must be an amount equal to 120% of the value of the contract and the buyer must permanently fill it up whenever the LOHN quote decreases by 10% at LOHNex's request by issuing a margin call.

If the final settlement of the price between the parties is not due to the lack of liquidity of the buyer, all the financiers involved by borrowing LOHN tokens will become co-owners of percentages of the goods produced, recovering the committed funds and the promised commissions for the sale of the goods. In this situation, the parties involved in the lohncontrol smart contract, other than the financiers, will be paid with the LOHN token in the smart wallet contract.

Stage 1

To do this, it hires the T1 carrier to deliver the raw materials and the technical documentation for the production. The T1 carrier is registered with the SC2 complementary smart contract. The fulfillment of the delivery conditions stipulated by SC2 is a prerequisite for the continuation of the contract.

Stage 2

In this stage, the internal IS suppliers deliver the other goods or services necessary for the production (accessories, complementary raw materials, production areas, utilities, etc.) The quality of the goods or services delivered by them is followed by the SC3 complementary smart contract.

Stage 3

At this time, the QCE quality control expert appears, who is hired by the buyer to defend its interests in the relationship with all the parties involved in the production process and to follow the achievement in very good conditions of the manufactured products by observing exactly the technical indications provided.

QCE carries out its activity based on the complementary SC4 smart contract and supervises the performance of the T1 carrier, the internal IS suppliers that are paid for by its express indication within SC4 and especially the producer P closely following the stages of the manufacturing process and the rigorous observation of the technological indications.

QCE ascertains that all the validity terms of the SC4 complementary smart contract are met and proposes to make payment for the production made to producer P.

Stage 4

The payment between the parties to the lohncontrol contract may be made either in the currency of the escrow contract originally constituted or in the LOHN token on the due day if it belongs to the buyer or he does not have enough liquidity to make the payment otherwise.

Stage 5

In the event of making all payments from the escrow account, the LOHN tokens borrowed for the rollout will be retransmitted to the rightholders in the wallets from which they were transferred.

The guarantee of money transfer by means of an escrow account is based on the "WE DON'T TOUCH THE MONEY" philosophy and is intended to provide maximum confidence to all parties involved in performing the lohn contract.

The promptness, diligence and proper execution of the conditions for the development of the Main SC1 Smart Contract and the Complementary SC2, SC3, SC4, and SC5 Smart Contracts by the parties involved will be forwarded to an IPFS archive that will establish through a specific algorithm the Business Rating of each part.

Business Rating will help businesses manage the reputational risk of trading partners.

Interaction between the lohncontrol.com project and the trading platforms of lohncontract.com

The lohncontrol.com project developed in the ethereum block-chain is designed to efficiently manage trading processes on the regional platforms of lohncontract.com.

lohncontract.com develops trading platform meant to provide predictability to the consumer goods manufacturing economy. We refer here to the goods of the textile, leather and footwear industry, the electronics and household appliances industry, the petrochemical industry and last, but not least, the food industry. For instance, all foods developed by hypermarkets under their own brand are the result of active lohn contracts.

Trading platform support local producers and the development of their commercial relationships with global brands. The first operational platform is bursadelohn.ro which operates in Romania, one of the largest producers of textiles, leather and footwear in Europe that manufactures products of the most important fashion brands in the world.

The mechanisms managed by the block-chain technology of the lohncontrol.com project have a major role to give mutual trust to all the parties involved in a lohn contract. For emerging markets that host such industrial and commercial processes, trust is a decisive variable in the sustainable development of local economies.