Abstract: The main purpose of the study is a comprehensive economic and legal analysis of the loan agreement in agriculture in the conditions of formation and development of elements of post-industrial economy in Ukraine. The research methodology is based on a systematic approach using the method of cognition from abstract to concrete and special methods of economic and statistical research (comparison, grouping, detailing of final indicators, generalization), which helped to ensure the reliability of research results and validity of conclusions. It was found that the loan agreement in agriculture is an economic and legal category that ensures the further development of agriculture in Ukraine in conditions of further integration of our economy to world market on competitive terms. It was determined that expanding the use of the loan agreement in agriculture is a necessary lever to increase production efficiency, formation and constant restoration of a competitive technological base in current conditions and further development of the whole agro-industrial complex considering the formation of post-industrial economy. It is proved that the application of the mechanism of crediting of agriculture in Ukraine has a positive effect on the development of the agro-industrial sector in Ukraine. It is determined that the current level and availability of lending to the agro-industrial complex in Ukraine are insufficient for quality modernization and achieving a high level of efficiency of agricultural production. The main value of this study is that it analyses the concept through the prism of two categories, namely: legal and economic in the conditions of formation of post-industrial economy and postmodern values in Ukraine.

Keywords: Post-industrial society, postmodern society, postmodern values, agriculture, agro-industrial complex, credit, loan agreement, interest, crediting, law, legal Economic, post-industrial economy.

Introduction

In general, the classical theories of post-industrial society suggest that the role of agriculture in the transit phase from industrial to post-industrial economy is declining. However, it is important to note that the post-industrial society with a corresponding change in the peculiarities of the economic system is not yet characteristic of Ukraine to the same extent as for Western countries, China, Japan, “Asian tigers” and so on. Today, our country is still dominated by economic factors inherent in industrial society, although elements of the post-industrial economy continue to take shape. Given the favourable climatic conditions and trends in global food markets, it can be argued that the share of the agricultural sector in the domestic economy will remain quite high. In the conditions of formation of a post-industrial society all its subsystems, including economy undergo sharp transformation. New forms of agricultural production are formed, which depend not only on achieving its efficiency, but also on the content and significance of labour, the “postmaterialist / postmodern” system of values, financing needs, intensification and innovation. Accordingly, the question arises about the adaptation of the industry to new realities.

Among the characteristics of the post-industrial model of the economy to determine the modernization of the agro-industrial sector should take into account the growth of production by increasing its efficiency (intensive type of production instead of extensive), achieving maximum production efficiency with minimal resource use, and increasing the role of human capital including training and continuous development of highly qualified specialists.

A prerequisite for the proper functioning of agricultural production in a highly dynamic and changing environment in terms of formation of the elements of post-industrial economy is a relevant credit policy that considers the characteristics of agriculture and generates conditions for its effective development. Due further formation of market relations in new post-industrial reality, it is impossible to develop the agricultural sector without effective credit support.

In those conditions an agricultural credit became to be one of the main mechanisms of development of agricultural sector. So on, the study of experience, lending to rural producers, has acquired special significance in the conditions of formation of post-industrial economy with prevalence of “postmodern values”. The practice requires a scientific justification for attracting sufficient credit resources to agricultural production on favourable terms.
Nowadays, the state should be able to ensure lending to the agricultural sector and improve the credit mechanism. It is necessary to provide available credit mechanisms to attract additional funds to stimulate the development of new production technologies in the industry, conducting scientific and technical research, increasing the share of information technology to increase the efficiency of agricultural production. Therefore, the problem of credit agreement in agriculture has great theoretical and practical importance for further development of Ukrainian economy and formation of efficient post-industrial farms.


One can observe dynamic changes in economic activity of rural areas in Europe. These changes are conceptualized as a “post-productivity transition” in the process of which farmers need to look for alternative ways to make a sustainable livelihood less dependent on social support for agricultural production (Jenkins, 2000). That is why there is the need to increase the efficiency of the use of credit funds aimed at financial support of enterprises in the agricultural sector of the economy, which determines the relevance of further research in this area. The study found a link between post-industrial society, post-materialist values, postmodern culture and opportunities for agricultural business development, including through increased opportunities for credit financing.

1. The importance of credit relations for agricultural production in the conditions of formation of post-industrial society

Post-industrial society means transition to a qualitatively new stage of mankind development, which has the hallmarks of a revolution (Semaniuk, 2018). The term “post-industrial society” was interpreted by
Penty as “a state of society that will emerge after the collapse of industrialism” (Penty, 1922), used by (Riesman, 1958) in “Leisure and work in a post-industrial society” The term “post-industrial society” was interpreted by Penty as “a state of society that will emerge after the collapse of industrialism” (Penty, 1922), used by (Riesman, 1958) in “Leisure and work in a post-industrial society”. The theoretical justification for this concept was given by (Bell, 1973), proclaiming the concept of “post-industrial society”, the main features of which he recognized the following: a growing role of creative intellectual work; development of scientific knowledge and information; increasing the importance of means of communication; the advantage of service sector, science, education over industry and agriculture (but not because of insignificance of the latter, but by reducing the share of material costs and human labour in these areas and its transfer to machines and mechanisms).

The theory of post-industrial society is a sociological doctrine that expresses the postmodern worldview, gives an understanding of the scientific and technical basis of postmodern culture. Having analysed the works of (Baudrillard, 1986) and (Bourdieu, 1984), one can argue that the concepts of post-industrialism and postmodernism do not contradict each other, as the post-industrialism is realized in the development of society and economy, and the postmodernism - in the culture sphere (Semaniuk, 2018).

Describing the politics of postmodernism, Morton G. Wenger argues that postmodernism denies the critical and revolutionary intellectual tradition of the neo-Marxists, which is considered doomed from the postmodernist point of view (Wenger, 1991). This leads to the idea that in the conditions of postmodernism new values are formed which have a significant impact on the way of life and activity of a society.

According to Inglehart, R., transformation of values into postmaterialist has been going on since the 1970s, with human rights values prevailing in all their expressions (Inglehart, 1997). Postmaterialist values are part of the postmodern culture, and postmodernity leads to reappraisal of tradition.

A loan is a specific contract in the conditions of post-industrial or postmodern economy, as it is concluded between economic entities, each of which seeks to maximize benefits and rationalize their own decisions, abstracting economic decisions from such postmodern values as subjective well-being, environmental protection and other historical or cultural contexts. In such conditions, state institutions take the position of preserving traditional cultures, “demonstrating varying degrees of energy
that potentially represent resources for alternatives to the modernist cosmopolitan way of economic development” (Jenkins, 2000).

Taking into account postmodern values and processes of globalization, agricultural production is becoming an investment-attractive sector of economy due to the fact that environmental quality, culture and traditions are becoming significant factors in the consumer choice. Inherent in postmodernism and post-industrialism and individualization leads to the fact that consumers prefer “authenticity”, “environmental friendliness”, “traditional / organic methods of production in agriculture” and etc. Such aspects are not taken into account in current credit agreements, but represent a potential opportunity to obtain favourable credit agreements for producers that show effective performance and results due to these factors. An important aspect of taking into account intangible factors in decision-making processes, including in the process of concluding credit agreements is to determine the value of information for management. Methods for assessing the economic effect of additional data (such as environmental, social and other factors) in decision-making are based on the concept of information value and theoretical-multiple (interval) approach to modelling the expected results of enterprises’ activities based on factors that reflect the cost of production. The basic idea of such methods is that additional consideration of data allows to reduce uncertainty at decision-making and, accordingly, to reduce risks of losses. (Manzhula et al., 2019).

In the post-industrial economy, agricultural producers are forced to go beyond the traditional market and existing technological relations. Loan contracts, which traditionally take into account only economic indicators in their material terms, need to be studied and improved in detail, taking into account postmodern values, recognition of costs and benefits in relation to the value of public goods and services.

It should be noted that the industrial paradigm has not exhausted itself in most countries (including Ukraine), where manual and low-skilled labour, industrial values and traditional way of life (traditions, customs, norms of behaviour), which is characterized by a static character of the society (Semaniuk, 2018). Post-industrial economy and postmodern society in Ukraine are in the early stage of development, so the main task of our study is the critical analysis of the current state of credit relations in agriculture in Ukraine and its potential value in the discourse of post-industrial and postmodern values.
2. State financial support of agricultural sector

An important component of state support for agriculture is, as a rule, its financial support, which is aimed at financial support for their activities. Simone Severini, Antonella Tantari using the Gini coefficient and its disaggregation, proved the need to avoid a sharp decline in funding for agricultural households on the example of certain regions of Italy (Severini & Tantari, 2013). Therefore, in the world in general and in Ukraine in particular, one of the most effective and such measures used by the state to stimulate the development of agriculture is the execution of credit agreements.

Thus, the main elements of state financial support for agriculture can be called: preferential taxation, subsidies, lending, agricultural risk insurance, pricing, subsidies.

Table 1. The main components of financial support for agriculture (developed by the authors)

<table>
<thead>
<tr>
<th>Elements of state financial support for agriculture</th>
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<tr>
<td>Preferential taxation</td>
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</table>

Thus, it is possible to say that lending, as a whole, as a category is an important element for the prosperity and development of agriculture in Ukraine.

The present day agriculture is developing in the direction of increasing the efficiency of agricultural production. In this regard, a stable combination of financial, economic, legal, and organizational factors is necessary. (Artemenko, 2019, p. 91).

Turning directly to the economic and legal analysis of credit agreements, it is necessary to indicate what is a loan and which agreement, in accordance with the laws of Ukraine is recognized as a loan agreement.

From an economic point of view, the category of credit is mainly considered as the trust of one person to another, on the basis of which the loan is provided with a certain value in cash or in kind for temporary use for a fee. This is the interpretation of the concept of credit follows from the
origin of this term from the Latin creditum, which means “believe”, “trust” (Seiko, 2013).

This definition contains the most general characteristics that reveal the content of the loan. In determining this economic category, it is necessary to focus on the following main features:

1) credit should be considered as a specific type of economic relations based on trust;

2) the economic basis of the loan is the mobilization and accumulation of temporarily free funds and the formation of loan capital from them;

3) the loan is an act of transfer by the lender of a certain amount of capital for temporary use to the borrower on terms of return and ownership (Kobylianska, 2013, p. 248).

3. Loan agreement in the legal field

If we consider the loan as a legal category, it should be understood in the plane of the loan agreement. According to the Civil Code of Ukraine (Art. 1054), under the loan agreement, the bank or other financial institution (lender) is to provide funds (loan) to the borrower in the amount and on the terms established by the agreement. The borrower undertakes to repay the loan and pay interest (Civil Code of Ukraine 2003)

Regarding the loan agreement in the legal field, it should also be remembered that there are quite a number of its varieties and forms. Thus, individuals and legal entities can use the following forms of credit: bank, commercial, mortgage, leasing, consortium, blank, consumer and others (Table 2).

<table>
<thead>
<tr>
<th>Table 2. Forms of loan agreements (Own development of authors)</th>
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<tbody>
<tr>
<td><strong>Forms of Loan Agreements</strong></td>
</tr>
<tr>
<td>Bank</td>
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<tr>
<td>Commercial</td>
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<tr>
<td>Mortgage</td>
</tr>
<tr>
<td>Leasing</td>
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<tr>
<td>Consortium</td>
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</table>
Thus, it is possible to conclude that the loan agreement is an economic and legal category that provides for the process of transfer of monetary assets (funds) from one party to another, and therefore, each of these parties is endowed with appropriate rights and responsibilities.

As for the loan agreement in agriculture, it should be noted that back in 2000 the Cabinet of Ministers of Ukraine adopted a resolution “On additional measures for lending to agricultural complexes” of February 25, 2000 No. 398, began the process of stimulating credit resources to agricultural producers through compensation interest rate on loans issued by banks for field work (at 50% of the discount rate, but not less than 17.5% per annum) (Cabinet of Ministers of Ukraine, 2000).

In Art. 11 of the Law of Ukraine “On Stimulating the Development of Agriculture for the Period 2001-2004” features were identified credit security of agriculture, as one of the ways of its state support, which is to combine the generally accepted procedure for granting loans with a special lending regime, which takes into account the peculiarities of agricultural production (President of Ukraine, 2001).

Thus, it is possible to conclude that the loan agreement in agriculture has long had a sufficient legal basis and application.

4. Credit programs to support agriculture

The support of agriculture by the government of Ukraine is usually reflected in the adoption of a number of regulations, which, inter alia, are aimed at more affordable conditions for obtaining loans.

Thus, the Resolution of the Cabinet of Ministers of Ukraine “On Amendments to the Procedure for Using Funds Provided in the State Budget for Financial Support of Measures in the Agro-Industrial Complex by Cheapening Loans” (Cabinet of Ministers of Ukraine, 2020) established the basic criteria for obtaining loans for entities engaged in agriculture. The resolution stipulates that support is provided to economic entities of the agro-industrial complex - legal entities and individuals - entrepreneurs who:

- carry out activities in the livestock industry and use credit funds to cover current costs and capital (investment) costs associated with activities in the livestock sector;

- have a net income (revenue) from sales of products for the last year up to UAH 20 million, - for all types of agricultural activities.

The state compensates such business entities up to 1.5 of the NBU discount rate, but not higher than the amounts stipulated in the loan agreements, reduced by 5 percentage points.

Interest rates are subject to compensation for:
- short-term loans raised to cover production costs;
- medium-term and long-term loans raised for the purchase of fixed assets of agricultural production, the implementation of costs associated with the construction and reconstruction of agricultural production facilities (Cabinet of Ministers of Ukraine, 2020).

In addition to the above-mentioned Resolution, it should also be noted that in accordance with the initiative of the President of Ukraine, the loan program “Affordable Loans 5-7-9%” was introduced in order to facilitate access of micro and small businesses to bank lending. Thus, loans are provided on a repayable basis in the amount not exceeding 500 thousand hryvnias, with the obligation to repay the budget for up to 5 years. The program has three interest rates (depending on the date of establishment of the business and its annual turnover): 5% per annum - if the revenue is up to 50 million hryvnias and create at least 2 jobs during the first quarter; 7% per annum - for businesses with revenue up to UAH 50 million; 9% per annum - for businesses with revenues from 50 to 100 million hryvnia (Affordable Loans Program, 2020).

Thus, it is possible to emphasize the certainly important role of the state and its bodies in the further provision of loans and the conclusion of credit agreements with entities operating in the agro-industrial complex.

Agricultural enterprises attract loans to replenish working capital in order to finance field work, harvesting, purchase of planting material, plant protection products, mineral fertilizers. Such loans are provided by banks in the form of revolving or loans to replenish working capital in 2019 amounted to 18-24% per annum. When forming the possible loan amount, the bank takes into account the specifics of the enterprise, its turnover over the past few years, credit history, as well as evaluates the collateral. Pledge can be agricultural machinery, real estate, equipment, facilities, deposit accounts. Also important is the duration of the enterprise in the market. The reputation of the borrower, the size of the land bank, the structure and amount of costs per hectare in relation to crop yields are also taken into account (Marenych, 2019, p. 31).

Banks can also offer short-term loans to agricultural companies - overdrafts. Interest rates on such loans - 17 - 23% per annum. However, given the specifics of most farmers who combine crop production with animal husbandry, face the seasonality of production, overdrafts with the need for monthly repayment of debt is not a convenient type of financing for agribusiness. The amount of overdraft depends on the turnover of the agricultural enterprise. As a rule, the average monthly turnover for the last 3-6 months is taken into account, the loan amount is up to 50-80% of this
turnover. However, if the overdraft is secured, the estimated value of the collateral is also taken into account (Arzhevitin et al., 2017).

In autumn 2019, banks and financial companies offered farmers financing programs for the purchase of new agricultural machinery - tractors, combines, trailers, seeders, trucks. Rates on loans for agricultural machinery today range from 17 to 20% per annum. The size of the minimum own contribution is usually set at 20-30% of the cost of machinery (National Bank of Ukraine, n.d.).

In 2019, rather significant funds were applied at providing loans precisely for individuals and legal entities operating in agriculture.

**Fig. 1** Loans provided by banks in 2019 to physical and legal entities operating in agriculture, formed on the basis of official data of the National Bank of Ukraine.

Given the needs of customers operating in the agricultural sector of seasonal nature, banks have developed a package of offers such a banking product as an overdraft. Its enables the borrower to make settlements with partners promptly, provide financing for commercial agreements, use credit funds rationally and optimize the paying interest cost.
### Table 3. Terms of overdraft in banks of Ukraine for agro-industrial companies, as of February 2020, are formed on the basis of official data of the National Bank of Ukraine

<table>
<thead>
<tr>
<th>Bank</th>
<th>Oschadbank JSC</th>
<th>PJSC Raiffeisen Bank Aval</th>
<th>ProCredit Bank JSC</th>
<th>JSCB Industrial Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan term</td>
<td>up to 2 years with mandatory monthly full repayment of debt</td>
<td>Opportunity to use the loan for 90 days without repayment of the loan amount</td>
<td>term of the loan agreement - up to 2 years with mandatory monthly full repayment of debt</td>
<td>from 1 month to 1 year with mandatory monthly full repayment of debt</td>
</tr>
<tr>
<td>Loan limit</td>
<td>up to 50% of the average monthly income on current accounts</td>
<td>The maximum limit is UAH 3 million</td>
<td>up to 50% of the average monthly income on current accounts</td>
<td>30-85% (maximum limit up to UAH 500,000)</td>
</tr>
<tr>
<td>Percentage Rate, % annual</td>
<td>1–7 days - from 17.5 8–14 days - from 19.5 15–30 days - from 21.5 more than 30 days - from 23.5</td>
<td>without collateral - 19-21 with collateral - 19</td>
<td>fixed</td>
<td>from 23</td>
</tr>
<tr>
<td>Commission, %</td>
<td>1.0-1.5 of the amount of the overdraft limit at the conclusion of the contract</td>
<td>1.0</td>
<td>1.0 of the amount of the overdraft limit at the conclusion of the contract</td>
<td>1.0 of the loan amount (limit), the minimum amount is UAH 1,500.00</td>
</tr>
<tr>
<td>Loan security</td>
<td>Real estate and movable property, working capital, blank</td>
<td>pledge, blank</td>
<td>pledge, blank</td>
<td>pledge, blank</td>
</tr>
</tbody>
</table>

The analysis gives grounds to state that the system of financial support of the innovation process in the agro-industrial complex formed in
Ukraine does not meet current requirements to guarantee the positive dynamics of expanded reproduction, resource efficiency and increase the competitiveness of enterprises in the agricultural sector.

Conclusions

The post-industrial society has entered into a sociological and economic system of categories, carrying out a significant impact on ways of organizing, financing and determining the effectiveness of economic activity. The main resource of the post-industrial society is knowledge, and the physical work, which has always been the basis of agricultural production is of secondary importance now. In such new reality, agricultural producers are facing complex challenges of automation, innovation, creation and use of science-intensive technologies taking into account the postmodern system of values. It is clear that these processes are not “absolute”, but the general trend raise no doubts. In Ukraine agricultural sector produces more than 10% of GDP and provides more than 40% of Ukraine's foreign exchange earnings. These sector shows a positive financial result, while the volume of funding for the industry remains extremely low. The main source of funding is own funds, which by share are significant, but insufficient for self-financing. The share of loans to the agricultural sector in recent years is much smaller than the industry’s contribution to the formation of gross value added in Ukraine. In these conditions, an important problem is procurement of financial resources, which is can be solved through the use of loan agreements in the practice of agricultural production.

The main donor of resources for agricultural enterprises in Ukraine are commercial banks. However, for many companies, lending remains a prohibitively expensive tool for raising external funds. A contract (agreement) is one of the most widespread general legal acts with which the law binds the emergence, change and termination of civil relations (Association of Ukrainian Banks, n.d.).

Some aspects (lack of adequate collateral and insufficient creditworthiness of most farms, high cost of credit resources) hinder the development of effective relations between commercial banks and agricultural producers.

It was determined that the loan agreement in agriculture is a necessary lever for the further development of the entire agro-industrial complex in the conditions of development of industrial characteristics and preparation of transit of the Ukrainian economy to largely post-industrial. It should be noted that an important role for a coordinated lending mechanism is also played by the program “Affordable Loans 5-7-9%” adopted in 2020.
in order to facilitate access of micro and small businesses to bank lending. Thus, it is possible to say that the loan agreement in agriculture is a complex economic and legal mechanism aimed at further development of agriculture in Ukraine. In the conditions of the postmodern prospect, when concluding loan agreements, it is proposed to take into account social and cultural values and their impact on achievement of managerial goals in agriculture.

**Acknowledgement**

The contribution of the authors to this paper was as follows: Olena, Artemenko, Svitlana, Kovalova, Liusia, Hbur were engaged in analysing and processing data on the use of a loan agreement in agricultural sector and further development of the whole agro-industrial complex. Oksana, Obrykina, Anna, Amelina were engaged in analysing and processing data on the state financial support for agricultural sector (preferential taxation, subsidization, lending, agrarian risk insurance, pricing, subsidization). Yevhenii, Kolomiiets was engaged in description of the classical theory of post-industrial society and determined the role of the agricultural sector in the transition phase from industrial to the post-industrial economy.

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