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Research paper

Land Governance: Traditions, Experience and Modern Development

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Abstract

The land governance system development, main directions in the part of land relations institutionalization and land evaluation works realization are considered in the article. Reforming land relations based on the land private ownership institution, aiming to become an ideal efficient land owner, in a number of industries received the opposite result. Market transformations were ahead and will be ahead of institutional changes in Ukraine, science and law-making lag in the real economic situation in the land use organization system. Studying domestic historical and foreign experience, the authors found a close relationship between the institutional provision of land relations and economic, agrarian-industrial, social, administrative-territorial and demographic reforms parameters and their final results. There was a lack of focus organization of economically feasible and environmentally safe land use. Authors determined that the land relations institutional development, - subject to the institutional economy laws, - is defined as development, taking into account not only economic criteria and legal norms set, but also ones informally recorded in ordinary law, customs and traditions and spontaneously defined boundaries that structure the interaction of individuals in the land relations field, considering not only economic but also society's political, religious and social development aspects.

Keywords: *land governance, land ownership, land relations, land use, land valuation*

1. Introduction

The state attitude to the land is a society stability barometer, and rational and efficient land resources use, forms economic stability basis and the country competitiveness.
Since 1990, the reform of land relations in Ukraine didn't have a preparatory period, defined stages and state programs were not adequately funded. It carried in itself revolutionary economic break-up elements, public and social institutions, breaking the legal innovations from the life realities and social traditions, making it impossible to often apply the land law norms.
Ukrainian agrarian sectors, relying on private land ownership institute, wishing to become an ideal efficient landowner, received the opposite result, which had broken into the production agrarian sector crisis and the village settlement network partial degradation. Market transformations were ahead and will be ahead of institutional changes in Ukraine. Science and law-making are behind the real land economy, destructive elements form institutional breaks and traps. After all, in land sector, in addition to the two existing paradigms (private law institutionalization on land and land reform implementation) there is a new an institutional land economy.
The specified requires further institutional legal changes and institutional development.

2. The study purpose

Based on historical analysis and foreign experience, having found institutional traps and contradictions, it is necessary to methodologically methodically and objectively determine the further sustainable development of land relations in Ukraine, in the context of European integration.

3. Results

By studying domestic historical and foreign experience close relationship between land relations institutional provision and economic, agricultural-production, social, administrative-territorial, demographic land reforms parameters and their final results were revealed [1].
The land relations historical epistemological roots elucidation contribute to awareness of the land transformation objective patterns and are the key to understanding their necessity.
For Ukraine are the following, one can distinguish especially characteristic social institutions that historically distinguish domestic land relations among other countries:
- equality of citizens, concerning rights to land, religion regardless, but inequality in relation to the individual concessions land, church lands frequent secularization (state-building);
- private restriction property with public and state interests;
- land ownership by foreigners regarding the acquisition special legal personality;

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- lack of deadlines in courts on land issues and disputes;
- social coercion in land issues;
- availability of specialized land courts and special pre-trial consideration land complaints and disputes;
- private lands special legal status, depending on receiving way;
- great financial liability for violation of land borders and self-grabbing;
- lands number limitation in one hands in the one-person ownership, family and courtyard;
- socially significant status of land community (communal) and general use of land and existence in the collective form, communal, cooperative, communal property;
- personal will of peasants, serfdom and feudalism rejection, occupation, the Cossacks and the Zaporozhian troops land phenomenon;
- personal interests subjugation - public, non-acceptance of property stratification, land redistribution socialized traditions.

Despite of the traditions and customs that differ significantly from the European once, development and land legislation codification in Ukraine was influenced by the Roman, Byzantine, Lithuanian Law, the Sachsenspiegel, the Magdeburg Law and the Cathedral Code.

Rooted in public consciousness, and the special institutional relation of Ukrainians to the land is defined as an institutional social asset, and each family tries to own a plot and to use it for gardening, floriculture, horticulture, both for commodity production and for esthetic pleasure.

The last land reform measures in Ukraine were not initiated from the bottom, imposed from the above, but they did not receive social resistance.

Having proclaimed the land reform slogan, «Land for those who work on it» in Ukraine until 2001, more than half of the land was privatized.

As a result of the land redistribution in Ukraine from 1992 to 2017, 74 % of agricultural land, 60 % of residential land, 3 % of recreation land and 1 % of industrial land were transferred to private ownership.

The land multi-vector redistribution in Ukraine in 1992 - 2017 years are shown in Fig. 1. The stock was redistributed with the allocation of farms permanent use up to 50 ha and up to 100 ha in labor-poor villages for 1 household.

The state reserve was redistributed for missing members of the collective farms and for personal peasant farms, especially for social workers in the countryside.

In the legal field, the reform is institutionalized in the Land Code of 2001, which came into force in 2002 [2].

The collective farms lands were subject to joint-ownership, the ownership with the issuance of state acts of collective farms with land co-owners list.

The code defines not only market mechanisms for the land relations development, but also land socialization, through free privatization; there was a centralization of land disposal state powers and a system reducing the local governments rights.

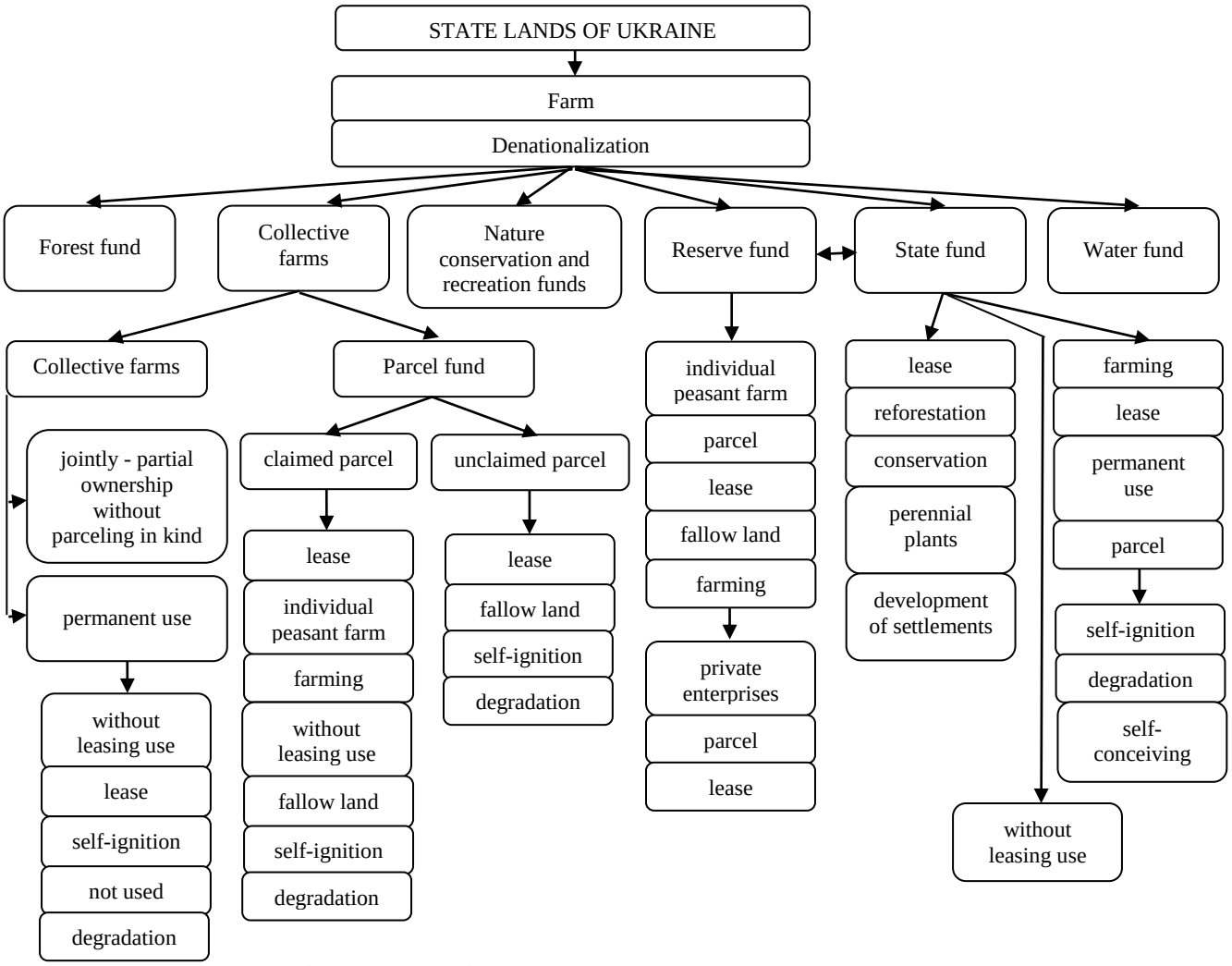


Fig. 1: Land fund redistribution of rural territories and agricultural enterprises in Ukraine in 1992 – 2017

Separate elements of the reform were not linked to the final results, the sustainable territories social-economic development identified priorities, especially rural ones [3].
There was measures of orientation lack in agricultural production favor, social development and the land safeguarding (especially arable land).
Ukrainian ranking in the quality rating of public and state institutions, as shown in Table 1, points to 83 and up to 120 places worldwide [4] (Table 1).

Table 1: The quality of public and state institutions in Ukraine

Indicator	The world (rating) place among other countries
Public confidence in politicians	95
State power independence	99
Objectivity of the decisions of civil servants	83
Public funds misuse	108
Shadow economy	100
Corruption level	120
Organized crime	95
State regulation effectiveness	101

The land relations institutional provision development in Ukraine, also far from perfect and in the Ukrainian scholar's estimations, is about 40 % relative to the society needs in terms of land relations regulation.
The economic system in Ukraine relies on the radical paradigm individual regions development economic, but in the land it is necessary to rely on the paradigm of land economy institutional development.
The land relations institutional development, - subject to the institutional economy laws, - is defined as development, taking into account not only economic criteria and the legal norms set, but also informally recorded in ordinary law, customs and traditions, and spontaneously defined boundaries structuring the individual's interaction in the land relations field, taking into account not only economic but also political, religious and society's social development aspects.
We can talk about an institutional trap in which land relations were found in Ukraine. Modern land legislation of Ukraine absorbed and borrowed the best land law examples of European countries, especially in the cadastre: cadastral zoning, coding, ground books, format of exchange file, National cadastre registration system, land valuation. But these elements don't form, but support governance and regulation of the land relations system [5].
Institutions need to be developed set up and institutionalized:
- land relations development national program;
- Land, Agrarian and Ecological Codes;
- bligatory cadastre and mandatory land management; market land valuation, European level of land payments;
- land-use infrastructure national system: Land Bank, State Land Fund, State Land Agency.
The main economy link is a land resource, the capitalization of which, through institutionalization, forms the foundation of the country's economic system.
Land valuation in the logical scheme of the land economy institutional development, has a key base position (Fig. 2).
In the scheme of institutional rental relations «Institute for Land and Real Estate Valuation and Rights to them» also occupies a central place (Fig. 3).
The land resources assessment, the land rights assessment, along with mechanisms for resource availability, mortgage lending, active land economic turnover and circulation, form economic mechanisms in which land, as the economic basis of production and at the same time as the main means, will be in the user hands, providing not only the highest level of productivity and efficiency, but also as rational use of land, taking into account public interests and territories sustainable development [1, 7].

The existing renting approach in Ukraine for economic land valuation, as a pure strategy for rents capitalization, is an ineffective tool for pricing and land relations tax regulation, due to clearly lower indicators of valuation norms.
On November 12, 2016, the Cabinet of Ministers of Ukraine adopted a resolution on The normative monetary valuation of agricultural land by forming the new taxation basis in context of natural-soil areas from UAH 14 to 45 ths. UAN/ha of arable land (the estimate decreased by 10%) [6].
The tax rate for land plots, the normative monetary valuation which has been carried out, is set at a rate not exceeding 3 % of their normative monetary valuation, for general use land - no more than 1 % of their normative monetary valuation, and for agricultural land - not less than 0.3 % and not more than 1 % of their normative monetary valuation (3.5 - 5 €).
The rent charge for land plots is formed from parcels, makes from 2.5 to 5 ths. UAH (80-180 €)/1 ha or from 10 to 12 % of the normative estimate.
It directly indicates the underestimated agricultural land valuation in Ukraine in 4-5 times.
Land valuation on lease and capitalization yields better results, even if the amount of tax and rent charge is capitalized, then we will receive (160 + 5000) × 23 = 120 ths. UAN/ha.
The transactions shadow format with land forms the market price of the right to land in Ukraine.
At resale of corporate law, the right to lease on arable land is estimated (7 years of lease) from 500 to 1200 €/ha, depending on the land basis size, the arrays and plots spatial arrangement, accessibility, the soil quality and field history, the right origin history, (only in 2017 the value of the right has increased by 50%). Land parcels are estimated to be the most expensive and the purchase of the right to parcel land reaches up to 3000 €/ha.
Sales agreements are regulated as land lease agreements, with regard to their use and disposal (without alienation), and the shadow transaction format is confirmed with premiums for entering into transactions from 5000 UAH/ha one-time payments, and a rent charge preliminary payment for 7 years from the rate of 100 €/ha year.
It is proposed to evaluate the land plots according to the rental concept (the rent capitalization), but having significantly improved the approaches to determining the differential rent of *I* kind: taking into account the differences formation complex factors in the land according to soil-climatic features and land placement conditions, taking into account not only the soil parameters, but also the heat and water supply level, as the corresponding indexes of average geometric product [8].
Introducing in our research soil changes indicators (I^{SC}), of the provision of land with heat (I^{h}) and moisture (I^{m}) to a single indicator, as aggregate soil-climatic conditions:

$$I_{(\varepsilon)i}^{ASCC} = \sqrt[3]{I_{(\varepsilon)i}^{SC} \cdot I_{(\varepsilon)i}^{h} \cdot I_{(\varepsilon)i}^{m}}, \quad (1)$$

where $I_{(\varepsilon)i}^{ASCC}$ – the aggregate soil-climatic conditions use index for estimating land by the option of its estimation in the district of the region.
If, $I_{(\varepsilon)i}^{ASCC} \to 1$ then, there is an improvement in the use of soil-climatic conditions on the respective lands, their fertility increases, productive potential increases.
Indices are calculated as the ratio of actual productivity to the normative in the valuation zone.
Absolute rent is, at first glance, easy to perceive, but the most complex is in the theoretical substantiation.
The absolute rent (rent income) determination is proposed to be carried out on the basis of a cost concept that requires the establishment of relatively worse land parcels or some conventional area, that is a subject to the set factors evaluation associated with unfavorable soil and climatic conditions, in the zone of the least fertile lands:

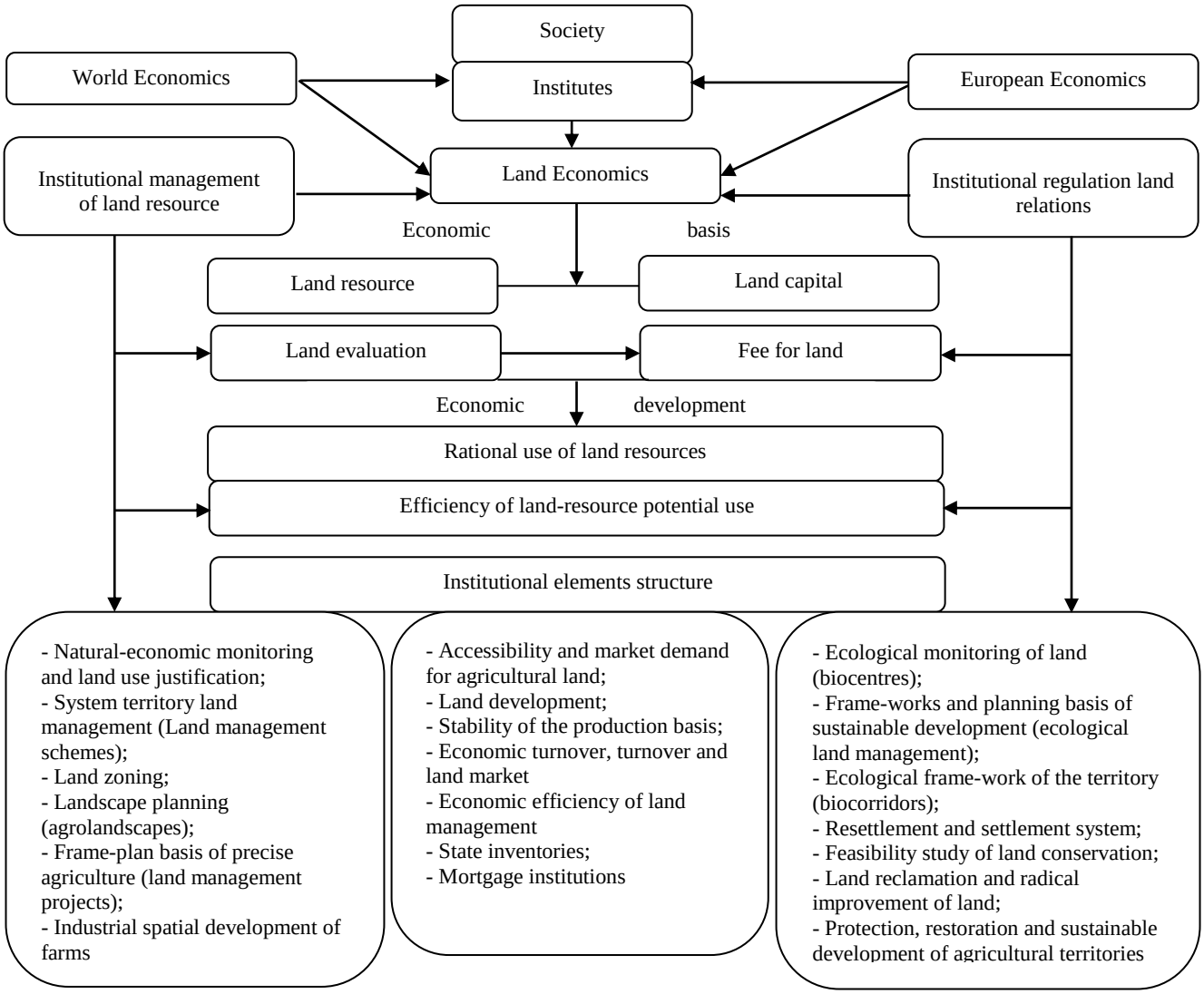


Fig. 2: Land economy of Ukraine institutional development logical scheme

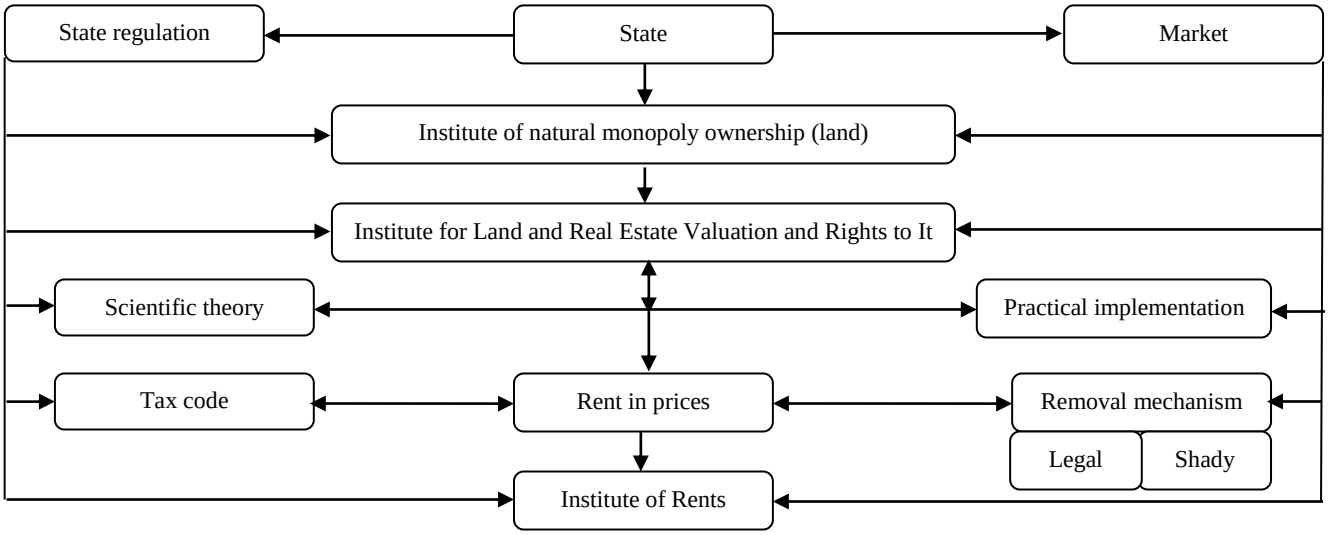


Fig. 3: Institutional scheme of rental relations in Ukraine

Table 2: Results of calculations in the lessor (owner) strategies context thein the game for the land transfer term rent

Criterion / A_i		Options							By mixed strategy L^*_A
		Bayes, m_{bi}	Bayes, m_{ri}	Laplace, m_{li}	Wald, α_i	Sevidzh, S_i	Hurwitz, h_i	Hodges - leman, L_i	
Lessor 's (owner's)	Low-paid short-term land lease (parcel), A_1	1,9	8,7	1,7	0	20	2	1,0	-

strategy	Increased paid medium-term land lease (parcel), A_2	4,9	5,7	3,9	1	15	5,5	3,0	-
	High-yielding long-term land lease (parcel), A_3	0,9	4,3	7,0	0	9	10	0,5	-
Optimal: - years		4,9	4,3	7,0	1	9	10	3,0	2,9
- strategy, A_i		A_1	A_3	A_3	A_2	A_3	A_3	A_2	L^*_A

$$AR_{\varepsilon} = Y^{ASCC}_{(\varepsilon)NVY} \cdot \left(\overline{P}_{\varepsilon} - P^{NVY}_{\varepsilon}\right), \quad (2)$$

where AR_{ε} – the absolute rent (rental income) size received (withdrawn) for the ε - th version of the assessment, UAH/ha;

$Y^{ASCC}_{(\varepsilon)NVY}$ – the normalized value of yield (productivity) under the aggregate soil-climatic conditions influence for the ε - th variant of the assessment, which corresponds to the worst production conditions, q (price per unit) / ha;

$\overline{P}_{\varepsilon}$ – the average public price of 1 cwt (price per unit) of agricultural products (its groups), taken depending on the -one variant of the general assessment in the region, UAH;

P^{NVY}_{ε} – the price of production (individual) 1 cwt (price per unit) of agricultural products or its corresponding groups for the ε - th variant of the estimation on the lands (areas) located in the worst production conditions, UAH.

In addition to market mechanism, the land prices formation is influenced by institutional factors, when the land resource assessment takes into account the land and resource potential use technological condition, ecological and economic reproduction and development of the land relations rightfulness and legal personality institutional components (limiting access to land by individual sub objects), transaction costs, the presence land shadow (> 50%), the level of taxation, political and economic stability, price policy, sales infrastructure but economic security, state guarantees locality market, etc. [9].

Most of these factors are difficult to assess by statistical and mathematical methods, but the main ones we try to take into account.

The assessment of the right to land is also determined by the lease terms, that is, the future income sum from this land plot.

The mechanisms for the land (parcels) lease optimal terms formation under the influence of the participant's competition and the change assessment in behavioral lessor strategies in decision making must take into account interest conflicts, their antagonistic nature, high transaction costs in the shadow format (bonus to the owner), rental rights limited competition. Above the possible measures various scenarios development for the formation of lease terms were envisaged. Results of calculations in the lessor (owner) strategies context thein the game for the land transfer rent term, based on the criteria of optimality, according to the payment matrix F^1_{ij} are shown in table 2 ([1] a set of strategies for the lessor is possible, which optimizes the lease term final result).

In most cases, the choice of pure behavioral strategies of the lessor (the owner) revealed that, according to the yield parameter, in particular, according to the criteria of Hurwitz and Sevidu, the landlord seeks to choose long-term strategies when leasing land (a parcel): accordingly, the optimal tenancy terms for him are 10 and 9 years. According to the Laplace criterion, the optimal lease term for a land parcel was 7 years. From the analysis of the participants strategies optimization, depending on their behavior scenarios (game models), it follows that in two of the three scenarios the land parcel transfer term to the lease from 8 to 12 years is optimal, which should be considered as the minimum necessary.

Modeling for game scenarios yielded results from 8 to 20 years, which should be defined institutionally as a limiting lease term [8], (Table 3).

Table 3: Optimal strategies and terms for leasing land according to the player's behavior patterns during game scenarios

Behaviors players	Optimal mixed strategy		Game price (optimum),
	the lessor (owner)	tenant (user)	
	S'_A by type			S'_B by type			years
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	p'_1	p'_2	p'_3	q'_1	q'_2	q'_3	
Tenant compromise with insufficient a land parcels number	0	0,792	0,208	0	0,625	0,375	8,1
Tenant compromise with a land parcels sufficient number	0	0,826	0,174	0	0,435	0,565	11,7
Uncompromising tenant with a land parcels sufficient number	0	1	0	0	0,167	0,833	20,0

Symbols: p'_1, p'_2 and p'_3 – optimal values of the landlord's strategy from 1 to 3. Similarly, q'_1, q'_2 and q'_3 – the optimal values of the tenant's strategy from 1 to 3.

The rent theory can't be selective in nature, by rights types, or by natural conditions.

Rent – in its pure form – is the land product part that is paid to the landowner (society) for the primary, natural and indestructible soil forces (natural fertility) use [10].

The natural and artificial fertility boundaries of the moving, which yesterday was like artificial fertility, can become natural and vice versa - natural fertility under pressure of intensification is replaced by artificial. Therefore, the economic essence of rent dominates the agronomic.

Existing land resource assessment models should rely not on pure market assessments (analogues of sales), but on the rent capitalization theory, both land (natural body) and traditional rights to it.

The first part takes into account the Differential rent, as the natural fertility of the land – the factors of production and its expediency for placement on the markets (and including the hidden quasi-rents), and the second component implements the land ownership absolute right (Absolute Rents) [11].

$$P^{M_1}_{(\varepsilon)i} = \frac{LR_{(\varepsilon)i}}{discont\ \ rate(i) - grouwth\ rate(r)}; \quad (3)$$

where $LR_{(\varepsilon)i}$ – the land rent value received from the hectare of arable land by the option of evaluation in the i - th district of the region, UAH., $LR_{(\varepsilon)i} = \left(DR^{'}_{\varepsilon} i + AP_{\varepsilon}\right)$

AR_{ε} –the absolute rent value for the ε - th variant of the estimation, UAH/ha

$$AR_{\varepsilon} = Y^{ASCC}_{(\varepsilon)NVY} \cdot \left(\overline{P}_{\varepsilon} - P^{NVY}_{\varepsilon}\right), \quad (4)$$

$DR^{'}_{(\varepsilon)i}$ – differential rent I kind, according to ε - th variant of estimation in i- district, UAH / ha

$$DR^{'}_{(\varepsilon)i} = DRI^{ql}_{(\varepsilon)i} + DR^{t}_{(\varepsilon)1} \quad (5)$$

discont rate (i) – taken as a share;

grouwth rate (r) – the growth rate of income, % (taken as a share).

The specified formula determines an intensive component for the future.

System analysis of institutional land relations, deregulated and identified a special kind of rent, as an institutional rent, which most influences on the right assessment to land and integral land use.

In the case of lifting the moratorium on the agricultural land sale, minimizing the primary market prices, in the state regulation effective mechanisms absence will give speculative impetus to the land rights secondary market to large scale (Fig. 4).

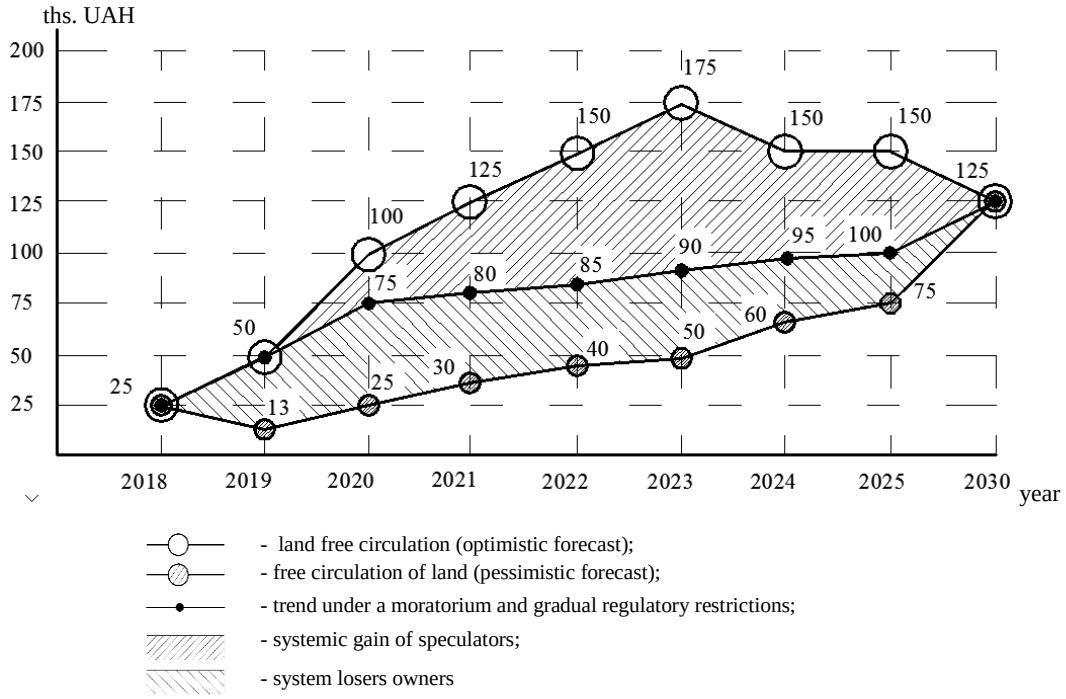


Fig. 4: Predictive expectation of arable land prices in the Poltava region (ransom right), ths. UAH /ha (as of March 1 of each year), (1 USD - 26 UAH)

4. Conclusions

The principle of borrowing and copying foreign models of land relations institutionalization is not always acceptable, therefore, Ukraine is developing its own domestic model of the institutional environment, taking into account geopolitical circumstances and the latest technologies and actualities concerning the development of agriculture and land relations in the countries of the world.

In the Ukraine agrarian sector there is a change in the competitive multifunctional agriculture paradigm and in a land relations systemic, programmatic, institutionalized institutional development paradigm on the institutionalized land economy paradigm.

The institutional economy toolkit made it possible to dictate and improve not only the land valuation traditional mechanisms, but also the specialization of land lease capitalization, and to identify the institutional rent, which is the determining factor in the rights assessment to land and integral arrays.

Taking into account the experience gained in reforming, it is necessary to carry out non-simultaneous general and gradual partial changes in the future, making it cautious, and constantly evaluating the results.

It is worth taking steps backwards, coordinating socio-economic deformations and contradictions, acting on the principles not only of economic expediency and optimality, but also social justice and humanity, environmental protection and the preservation of natural fertility for future generations.

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