Розглянуто проблеми фінансів, інновацій, підприємницької діяльності, менеджменту, екології та окремих ринків.
Для наукових працівників, викладачів, аспірантів і студентів.
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This edition contains articles describing problems of finance, innovations, entrepreneurial activity, management, ecology and separate markets.
For scientists, lecturers, PhD and students.

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NEW INSTITUTIONAL ECONOMICS FRAMEWORK FOR ASSESSING AND IMPROVING AGRARIAN ORGANIZATIONS

We incorporate interdisciplinary New Institutional and Transaction Costs Economics and suggest a framework for assessing efficiency of farms and agrarian organizations. Our new approach includes: study of farm and agrarian organizations as governing rather than production structure; assessment of comparative efficiency of alternative market, contract, internal, and hybrid modes of governance; analysis of level of transaction costs and their institutional, behavioral, dimensional, technological and natural factors; determination of criteria of farm efficiency and its effective boundaries; specification of economic role of government and needs for public interventions in agrarian sector; assessment of comparative efficiency of alternative forms of public involvement.

Keywords: efficiency of farms and agrarian organizations; market, private and public governance.

Introduction. Unprecedented development in the theory of economic organisations in the past decades has brought about to a significant evolution in understanding of essence and efficiency of agrarian organisations (Bachev, 2004; Harvey and Sykuta). Nevertheless, specific and partial approaches for assessing efficiency of farms and other economic organisations in agriculture are predominantly used. Efficiency of agrarian organisations is usually evaluated (only) through "technical efficiency" of production factors and "productivity of employed resources". Comparisons are made of levels of efficiency across farms of different type, sectors and countries independent to the specific economic, institutional or natural environment of their development. "Ideal" models and sizes of "effective" (livestock, cereal etc.) enterprises are recommended based on optimization of technological factors of production and/or experiences in other regions and countries. Moreover, other agrarian organizations (such as contracts, associations, markets, public forms) are not considered as alternative structures but are ignored or studied independently.

In more sophisticated models (e.g. Neoclassical Economics) the criteria for assessing efficiency of an organization is derived from the equilibrium condition of the entire economic system – "when marginal income is equalized with the marginal costs" (Pigou). According to such understanding the entire economic activity of agents is governed by a single "free market mode". Organizations using resources with different (higher, lower) from marginal productivity are inefficient. Rare cases of "market failure" are recognized (e.g. "tragedy of commons", "externalities") but they are easily detected and timely corrected though "perfect" state intervention.

However, traditional approach for assessing economic organizations cannot give answer to the question: why there exist so many organizations performing with a great variation in efficiency for a long period of time. For instance, all analysis show a high sustainability of "inefficient" organizations in Bulgarian agriculture during post-communist transition now – low unproductive subsistence and (semi)market farms, production cooperatives with profitability several times lower than private farms, sub-sectors with "return on resources" bellow the agricultural average, inefficient contractual and vertically integrated arrangements, not-working public organizations etc. (Bachev, 2010a). Economic logic shows that if efficiency of a particular organization is low there will be always a strong private or public mechanism (competition, public intervention) for reallocation of resources to more effective application. Consequently, in the long run there will exist only "effective" organizations governing resources on (close to) socially acceptable level of efficiency.

Traditional approach estimates and compare levels of efficiency of different organizations without even looking for answering the question: why there exist so big variety of organizations in a country, sub-sector of agriculture, geographical region etc. – one-person farms, group farms, registered cooperatives and firms of different kind, associations and joint ventures, subsistence farms, part-time and full-time farms, small and large farms, contractually or fully-integrated forms, hybrid (public-private) organisations etc. Therefore, in the narrow framework of approach restricting efficiency of economic organisations to production costs, it is neither possible to understand the economic logic of diverse agrarian organisation nor to assess their comparative efficiency and complementarities (Bachev, 2004).

This paper incorporates achievements of the New Institutional and Transaction Costs Economics and suggests more adequate framework for assessing the efficiency of farms and diverse economic organizations in agriculture.

1. Needs to study farm and agrarian organizations as governance structures

Existence of diverse economic organizations in agriculture could be better understood with their role to govern relations between individual agents and minimize on transaction costs. Carrying out agricultural activity and related exchange (e.g. land, labour and inputs supply, financing, marketing of output etc.) is usually associated with significant transaction costs. For instance, there are costs for complying with institutional requirements (laws, standards, informal norms etc.), finding best prices and partners; negotiating conditions of exchange; contract writing and registration; enforcing negotiated terms; dispute resolution (including though court system or another way); adjusting or termination along with evolving conditions etc.

It is among fundamentals of the political economy that division and specialization of labor, and related exchange and cooperation, open up enormous opportunities for increasing productivity and welfare. They create possibilities and incentives for deepening specialization and exchanges. What is "new" however, is that they are also associated with additional costs known as "transaction costs" (Coase, 1937). The high costs of outside exchange make it more profitable to carry out division and cooperation of labor (a transaction) within a certain organization (firm, group farm) instead across the market. For instance, a specialized livestock farm organizes internally a crop production activity (hiring additional labor, farmland) because of the significant costs and risks for market procurement of forage. Nevertheless, the internal management of transactions is also associated with costs (for directing, stimulating and supervising hired labor; coordination and controlling partners activity etc.) which restricts unlimited expansion of borders of (internal) organization. Thus a transaction (activity) will be carried in an organization if the costs are lower than for governing that transaction across market or in another organization.

In agriculture it is almost impossible to give examples where the organizational form is unilaterally (pre)determined by the technology1, and with the same
production technology are possible many forms of organizations. Usually, every agrarian activity and exchange could be governed through a great variety of alterative forms. One extreme for the farm manager is to specialize exclusively in governing of market transactions (rather than production management) -- e.g. leasing-in farmland and long-term material assets, purchasing all services for cultivation and harvesting of output, buying needed short-term material assets, selling all primary products on market. Another extreme is a close one-person or group farm -- the farmer(s) employ only own resources and labor, and consume the entire product.

Between above two poles there is a spectrum of feasible modes for governing of agrarian activity and exchange. For instance, "cultivation of land by a tractor" can be governed in numerous ways: the farmer can buy (unified ownership), rent (rent contract) or lease-in a tractor (input and credit supply interlinked contract), and use it for cultivation of land; the farmer could buy once or multiple times cultivation service from market (spot-light of long-term service contract); a number of farmers may buy/lease in jointly a tractor (joint ownership) and use it in a group (producers cooperative) or individually; the farmer can join a cooperative providing cultivation services (non for profit organization); the farmer may lease the land out to a tractor owner and share the output (tenancy contract with fix or share rent); the farmer can hire a tractorist to work on farm (employment contract), and may even sell out the cultivation service (profit making organization); the cultivation services to farms could be subsidized by the Government (trilateral mode), or provided by a municipality or a state company (public organization) etc. Depending on the comparative efficiency of practically possible forms preference will be given to one or another organization of activity/exchange. Consequently distribution of the overall activities between different farms, agrarian organizations, and markets will be determined by the comparative costs for using various governing arrangements as the most efficient one(s) minimizing the total (internal and external) transaction cost will prevail in the long run. Therefore, the economic efficiency of farms and agrarian organizations should take into account not only their capacity to minimize production costs, but also the ability to economize on transaction costs. While the production costs are "cost associated with proper technology" ("combination of production factors") of certain farming, eco-conservation, servicing etc. activity, the transaction costs are costs for governing relations between individuals (for adaptation to institutional restrictions, coordination of activity, protection and exchange of various rights etc.). Moreover, both (current) costs for using individual organizations and the long-term costs for their development (initiation, maintenance, modernization, liquidation) have to be taken into account (Bachev, 2004).

If the execution of activity and exchange was not associated with transaction costs (world of "zero transaction costs") then the mode of organization would have no economic importance (Williamson, 1996). The individuals would govern their relationships with the same efficiency, though free market (adapting to price movements), and private modes of different types (contracts, firms), and collective decision-making (cooperative, association), and a nationwide hierarchy (a single private or state company). Then the technological opportunities for economies of scale and scope for production of socially needed products and services (maximum productivity of resources, "internalization of externalities") would be easily achieved (Coase, 1960). All information for the effective potential of transactions (optimization of resources, meeting demands, respecting rights and rules) would be costlessly available to everybody, and individual would costlessly define new rights, and protect absolute and contracted rights, and trade (exchange) owned resources in mutual benefit until exhausting possibilities for increasing productivity and welfare (situation known as "Pareto efficiency").

However, very often the high transaction costs (e.g. consequence of undefined and badly defined and enforced property rights) make it difficult or even can block otherwise efficient (mutually beneficial) for all parties activity and exchange. For instance, despite the high pay-off of investments in agrarian research and innovation, the market and private agents do not organize (at all, or at a socially desirable scale) such activity/transactions because of the high uncertainty and low (market and private) appropriability of investment (Bachev and Labonne).

Since carrying out agrarian activity is connected with transaction costs, the "rational" agents will seek, chose, and develop such modes for organization of activity and exchanges which maximize transacting benefits and minimize transaction costs. The type of economic organization is crucial since various governing modes give unequal possibilities for participants to explore social and technological opportunities (meeting demands, economies of scale and scope, non-separability of activity), coordinate and adapt transactions, stimulate acceptable behavior of counterpart, control and protect from unwanted expropriation of investments etc. In the long-run the inefficient forms will be abandoned and only effective modes for organization of agrarian activity and exchange will dominate.

Each activity and transaction has different specific characteristics varying according to the institutional environment (legislation, efficiency of public enforcement of laws and private contract, other formal and informal restrictions), personal characteristics of agents (preferences, accumulated experience, established reputation, tendency for opportunistic behavior, risk aversion), macroeconomic conditions (economic stability, foreign trade regime, available state support), dominant technologies (mechanization and standardization of operations, application of information technologies), and natural environment (recourses endowment, dependency).

There exist no single most efficient form for organization of all agrarian activity and transactions in all practically possible economic, institutional and natural settings. According to the critical dimensions of activity/exchange the agrarian agents will use the most appropriate (effective) mode for governance. In any particular moment the entire agrarian activity and allocation of resources will be carried out (governed) through a great variety of economic organizations: part of it will be within a classical one-person farm (firm), another part will be governed though a special contract modes ("private order") between independent partners, the third part be coordinated by the movement of market prices and market competition ("invisible market hand"), part will be organized though collective decision-making (partnership, cooperative), another part will be managed internally by a manager or more complex hierarchical structures, some will be supported by a third party (Government, international assistance), or would require more complicated and hybrid modes.

Transaction costs minimizing "logic" helps us understand the evolution and efficiency of modern agrarian organizations -- the dynamics in development and potential of diverse type of farms (subsistent, semi-market, group, for profit or non for profit orientation, corporate) and coalitions;
economic horizontal and vertical boundaries of farms (extension of internal division and specialization of labor, product diversification, decisions to "make of buy", "sell or continue processing", "buy or rent", "organize production or transfer-out user rights on resources"); diverse kind of contracts (classical, neoclassical, trilateral, long-term, interlinked) for supply of land, labor, services, resources, innovation, finance, risk management, marketing; economic needs for cooperation with competitors (in inputs supply, marketing, environmental conservation, lobbying) or vertical (downstream, upstream) counterparts; forms of management of natural resources and eco-system services; pace and limits of development of agrarian and related markets; needs for and efficiency of state and/or international intervention etc.

What is more, efficiency of particular organization can hardly be assessed without analyzing efficiency of complementary and/or competing organization(s). For instance, the "high" efficiency of numerous small (and domestic) farms and production cooperatives during post-communist transition in Bulgaria can hardly be properly evaluated without analyzing their high complementarities (Bachev, 2010b).

According to the dominant institutional environment (distribution of formal and informal rights and obligations between individuals and groups, and efficiency of enforcement of "rules of the game") and the forms of public involvement (state provision, assistance regulation), the individual market and/or private organizations will be with quite dissimilar efficiency for different agents and sectors. For instance, in transitional conditions of not well-defined and assigned private rights on farmland, and the high costs for their protection and exchange, the short-term lease and the internal integration (subsistence and semi-market farming, production cooperation) were the most efficient forms for organization of land supply in Bulgarian agriculture (Bachev, 2010b). Therefore, specific institutional environment in which economic activity is carried out is the key parameter, which eventually (pre)determine the type and pace of socio-economic development of a particular social group, region, sector of economy, country etc. (North).

Thus in the real world with incomplete and not-well-defined and enforced rights, and positive transaction costs, the farm and other agrarian organizations have a significant economic role. Farms are not only production but a major governance structures – the forms for organization of transactions and for minimization of transaction costs. The efficiency of different type of farms cannot be properly understood and assessed without analyzing their comparative production and governance potential. It must be abandoned commonly used "Nirvana approach" for evaluating organizational forms as "good" or "bad" for their own, or on the basis of a specific (technical, distributional, financial, ecological etc.) type efficiency, or in a comparison with some non-feasible (ideal, institutional and transaction costs free, in other countries etc.) model. The evaluation is to be directed to finding out the comparative advantages for initiating, establishing, using, management, adaptation, intensification, coordination, stimulation and controlling of the alternative and really possible modes of governance in the specific market, institutional, technological and natural environment.

2. Factors for choice of organizational form

Individual forms of governance have specific advantages and disadvantages for protection of rights of participants, and coordination and stimulation of socially needed agricultural activity (production of food and feed, materials for industry, environmental conservation etc.). They are alternative but not equally efficient modes for organization of individual activity/transactions since they have different features (advantages, disadvantages) to coordinate, control, and stimulate (maximize benefits from, minimize costs of) transactions.

The free market has a big coordination and incentive advantages ("invisible hand of market", "power of competition"), and provides "unlimited" opportunities to benefit from specialization and exchange. However, market governance could be associated with high uncertainty, risk, and costs due to lack of adequate information, price instability, possibility for opportunistic behavior, "missing market" situation etc.

The special contract form ("private ordering") permits better coordination, intensification, and safeguard of activity/exchange. However, it may require large costs for specification, writing down and registration of contract provisions, controlling contract implementation, adjustments with constant changes in conditions, enforcement and disputing of negotiated terms etc.

The internal (ownership) organization allows greater flexibility and control on activity (direct coordination, adaptation, enforcement, dispute resolution by fiat). However, extension of internal mode beyond family and small-partnership boundaries command significant costs for coalition (finding partners, design, registration, restructuring), and current management (collective decision-making, control on coalition members opportunism, direction, supervision and motivation of hired labor).

The separation of the ownership from the management (cooperative, corporation) gives enormous opportunities for growth in productivity and transacting efficiency – internal division and specialization of labor; exploration of economies of scale and scope; introduction of innovation; diversification; risk sharing; investing in product promotion, brand names, relations with counterparts and authorities. However, it could be connected with huge transaction costs for decreasing information asymmetry between management and shareholders, decision-making, controlling opportunism, and adaptation. The cooperative and the non-for profit form also suffers from low capability for internal long-term investment due to non-for-profit goals and non-tradeable character of shares (horizon problem).

Which one from the principle form of organization of activity and transactions will be used depends on the comparative efficiency (transaction costs) of practically possible alternatives.

The transaction costs have two behavioral origins: individual's bounded rationality and opportunism (Williamson, 1981). Agrarian agents are with bounded rationality – they do not possess full information about the economic system (price ranges, demands, trade opportunities, development trends etc.) since collection and processing of such information is very expensive or impossible (multiple markets, future events, partners intention for cheating etc.). In order to optimize decision-making they have to spent costs for "increasing their imperfect rationality" – for data collection, analysis, forecasting, training, consultation etc.

Economic agents are also given to opportunism and if there is an opportunity for some of transacting sides to get non-punishably extra benefit/rent from exchange he/she will likely to take an advantage of that. Several major forms of opportunism can be distinguished:

- pre-contractual opportunism ("adverse selection") – when some of the partners use the "information asymmetry" to negotiate better contract terms;
- post-contractual opportunism ("moral hazard") – when some counterpart takes advantage of impossibility for full observation on his activities (by another partner, a third-party) or when he takes "legal advantages" of unpredicted changes in exchange conditions (costs, prices, formal regulations);
- non-contractual opportunism ("unwanted "exchange", stealing of rights) from private and/or public.
agents without any contracting process (because of lack or asymmetry of information, capability for detection and protection, weak negotiating positions);  
- opportunism of "free riding type" – it occurs in development of large-organization where individual benefits are not-proportional to individual efforts (costs) and is everyone expects others to invest in organizational development, and benefit from the new organization in case of a success (Olson).

It is often very costly or impossible to distinguish opportunistic from non-opportunistic because of the bounded rationality of agents (e.g. farmer finds out that purchased seeds are not high quality only during harvesting time). Agents have to protect rights, investments and transactions from hazard of opportunism through: ex-ante efforts to find reliable counterpart and design efficient mode for partners credible commitments; ex-post investments for overcoming (through monitoring, controlling, stimulating cooperation) of possible opportunism during contract execution stage; and permanent efforts/costs for protection from unwanted non-contractual exchange though safeguarding, diversification, cooperation, court suits etc.

Besides the transaction costs, the choice of economic organization also depends on a number of additional important factors:

First, personal characteristics of individual agents – preferences, ideology, knowledge, capability, risk-aversion, reputation, trust, "contractual" power. For instance, farming organization is often restricted to a family partnership; in some cultures, the cooperative is the preferred mode of agrarian organization. If the farmer is a good manager he will design, control and run a bigger (more effective) organization adapted to his specific needs – manage effectively more internal (hired labor) and outside (market and contract) transactions. A risk-taking farmer prefers risky but more productive forms – e.g. bank credit for a new profitable venture. When counterparts are family members or close friends there is no need for complex organization since relations are "governed" by the high mutual confidence, good will, and common interests of parties. Benefits for farmers could take different forms: monetary or non-monetary income, profit, indirect revenue, pleasure of self-employment or family enterprise, enjoyment in agriculture, desire for involvement in environment or heritage preservation, increased leisure and free time, other non-economic benefits.

Second, institutional environment – formal and/or informally imposed social order ("rules of the game") and associated costs. Often the choice of governing mode is (pre) determined by the institutional restrictions as some forms for carrying farming activities, land and labor supply, trade of output etc. could be socially unacceptable, too expensive or illegal. For instance, corporate and cooperative organization of farming is forbidden in many countries; market trade of farmland, natural resources, and some products/resources is illegitimate, private management of natural ecosystems is not allowed; some type of farms, agrarian property or transactions are with preferential tax regime. However, if costs associated with the illegitimate governance is not high (possibility for disclosure low, enforcement and punishment insignificant) while benefits are considerable, then the more effective modes prevail – large gray or black economies are widespread around the globe.

The (external) institutional environment considerably affects the level of transaction costs and thus the choice of economic organization. For instance, in recent years thousands of Bulgarian farms and organizations have been closed due to impossibility to adapt to new EU standards for quality, safety, environmental preservation, animal welfare etc. Principally, in conditions of stable and well-working public regulation (regulations, quality standards, price guarantees, quotas) and effective mechanisms for laws and contract enforcement, a preference is given to spotlight and classical/standard contracts. When rights on major agrarian resources (lands, waters, material assets) are not well defined, and absolute/contracted right effectively enforced, that lead to domination of primitive subsistence farming, personalized and over-integrated forms, unsustainable organizations, undeveloped and missing markets.

Third, natural and technological factors like non-separability and interdependency of activity, technological economies of size and scale etc. In rare cases there is only one practically possible form for governance of agrarian activity. For example, the natural minimal size of farming organization is determined by a technological parameter such as non-separability of activity (e.g. biological non-separability of individual animal). In Japanese dispersed paddy agriculture water supply could not have been conducted by individual farmers (high interdependency, non-separability of water use) and since earliest period water use organization developed as a public project. The effective governance of some environmental activities also requires a certain scale and thus collective actions at local, regional, national or transnational scale. However, besides these few examples, in farming is almost impossible to find cases where the form of governance is unilaterally determined by the technological parameters.

Another technological factor, which can determine the form of governance (type and size of the farm) is possibility to explore technological economies of size and scale. For instance, in order to use a large harvester-combine the farmer extend the farms size, or produces two or more products with different technologies in order to utilize "free" resources (family labor). Generally, development of technology follows the demand in the sector and in fact is also a variable parameter. What is more, maximal scale economies could be achieved not through internalization of activity but through market exchange of specialized activity – e.g. selling out or purchasing a service "harvesting with a combine". Free resources of the farmer could also be traded (sold, leased-out) more effectively on market instead of being used in own non-specialized activity (opportunity costs rule).

Actually, we can observe the opposite tendency – dependence of technological development from the governance structure. It is typical when the institutional restrictions (land transfer, hiring labor) and the high transaction costs (for outside financing/crediting) restrict realization of the potential of available technologies. Widespread application of primitive technologies is a rule rather then exception in agrarian sector. In other instances, the high transaction uncertainty or imperfect institutional arrangements lead to expansion of farm organization beyond the "technologically optimal" scale. In East Europe has been common "over-concentration" during communist period, and "over-integration and cooperation" in the following transition afterword.

The technological development affects enormously the structure and level of transaction costs. Mechanization and standardization of operations and products increases manageability and leads to extension of activities under a single management enlarging internal (internal division and specialization of labor) and outside (market and contract procurement, trade, cooperation) transactions. Possibilities that progression of modern production, transportation, measurement, communication etc. technologies gives to coordinate and intensify transactions and minimize costs are immense – easy assessment and traceability; on line information, co-

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2 Despite that this form of opportunism is widespread it is often ignored in economic literature.
ordination, monitoring, detecting, advise; direct low costs exchanges and collective actions of interested agents at national and international scales; rapid detection of problems and interventions by the government; full participation of individuals in and control on public decision-making etc.

3. Criteria for the efficiency of farm

The better understanding of the essence of agrarian organizations let us re-size the criteria for economic efficiency of the farms as well. The "immediate combination" of the factors of production in agriculture will have to be carried out in such forms which optimize (minimize) the total production and transaction costs of participants. One farm will be efficient if (has a potential to) realize maximum possible productivity of resources with minimum transaction costs. According to that an increase in efficiency of an enterprise means improving productivity with the same transaction costs or decreasing the transaction costs for achieving certain productivity. The (maximum) efficiency of the farm is achieved when the potential for increasing productivity of resources is realized with the minimum transaction costs comparing to practically possible alternative organization.

Often, the alternative organization of the farm (commercialization of internal transactions, transformation of one-person farm/firm into a coalition) is obviously more efficient since it increases the overall technological and transactional benefits with less overall costs (economies of scale and size). However, if changing the organization is associated with additional production benefits (reduction of production costs, growth in productivity and quality) at the expance of additional transaction costs (management of a contract for finance supply, innovations and services, hiring labor), then the new organization will be efficient if there is a net benefit — when benefits in the form of growth in output, income, free time etc. are bigger then the growth of transaction costs.

Methods for assessing the partial and overall productivity of resources (productivity, profitability, measurement of current and capital costs etc.) are well elaborated. What is a challenge is the "measurement" of transaction costs. One direction for is the direct comparison of costs for each transaction in different forms as organization which requires less costs is more efficient. For instance, a comparison is made whether is more beneficial own marketing of output or it is cheaper to use a marketing cooperative.

Sometimes, the costs of transaction are easily determined since they are object of separate accountancy or can be easily specified. For instance, costs for registration, agro-market information, advertisement, court suits, guarding property, payment of bribes, (part of) losses from ineffective transactions (thefts, cheating, failed product) could be quite precisely specified.

However, a portion of transaction costs is difficult (very expensive) or impossible to be determined. In the late group are included the costs for finding best partner, negotiation, enforcement of contractual terms, organizational development, interlinked transacting, unrealized and failed deals. It is often complicated to separate transaction costs from the traditional production expenditures3 — e.g. while executing farming operations a farmer supervises hired labor; during inputs transportation he negotiates marketing of output. Approximate estimate-for the level of transaction costs could be made by interviewing farm managers where they indicate the level (high, middle, low) of efforts/time devoted for governing different type transactions: for finding needed labor for hiring, land and material inputs for purchase and lease; negotiating terms of exchange; monitoring implementation of contractual obligations; adaptation of contracts to new conditions; conflicts resolution; memberships in professional organizations; relations with agrarian bureaucracy etc.

Component comparison of transaction costs could not always give idea for the efficiency of organizations since often the alternative form decreases one type of costs while increasing another type transacting costs. For instance, internalization of a transaction (replacement of market with integral mode) is associated with reduction of costs for information supply (overcoming market uncertainty), permanent (re)negotiations along with constantly changing conditions of exchange, safeguarding investments from outside opportunism etc. On the other hand, it enlarges costs for organizational formation, decision-making, integral management, supervising and motivation of hired labor. In above example with the alternatives for marketing of output it could be preferred "internal marketing" (consumption, production utilization, processing) as more beneficial form of organization comparing to direct sell or employment of marketing cooperative.

Moreover, a part of transactions in agriculture is governed not by "pure" but through complex or interlinked modes — e.g. inputs supply in "package" with know-how, extension of service supply; joint supply of inputs and credit; crediting of production against marketing of output. Thus, it is important to take into consideration the overall costs for organization of transactions of different types — all external and internal transaction costs of the farm.

Often it is very difficult to select a base for comparison in view that high transacting costs entirely block development of alternative organization. For instance, the market for agrarian credit did not emerged in Bulgaria during most of the transition and the internal supply (utilization of own finance, direct outside co-investment) was the only possible form for finance supply of farms. Here the comparative level of transaction costs is impossible to be determined and appreciate the "high" efficiency of integral mode relative to debt form of financing. In that case funding with "own means" and with "bank credit" are not real alternative but completely different governing structures. Thus, application of indicators for estimation of the comparative efficiency of investments based on "opportunity costs" (discounting, payback period, internal rate of return) independent from the form of funding, have no significant economic sense.

4. Comparative structural analysis

Another direction for evaluating efficiency of diverse agrarian organizations is the Discrete structural analysis (Williamson, 1996). Since it is either very difficult or impossible to determine absolute transaction costs for individual modes, assessment is made on comparative costs of alternative organizations. Besides, quantitative approach (absolute and relative measures, marginalism) is replaced by qualitative (structural) analysis and indirect assessment of transacting costs. Actually, we are interested not in absolute level of transaction costs in different form, but in organization with the lowest comparative costs for a particular activity/transaction.

The new approach for assessing economic organizations turns individual transaction and the costs associated with it into a basic unit of economic analysis. The analysis of agrarian organizations includes following major steps: First, the major type transactions in which agent managing agrarian transactions (farm entrepreneurs, farmers) participates are to be determined. Second, the feasible alternative forms for organization of different type agrarian trans-

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3 All these difficulties make it impossible to use various models of Neoclassical economics through simple adding a new "transaction activity". (Furuboth and Richter)

4 That is logical since individual governing structures differ each other not in marginal but qualitative — discrete structural way.
actions in the specific environment are to be identified. Third, critical factors of transaction costs, and costs (and benefits) associated with alternative governing modes are to be specified. Forth, the comparative efficiency of alternative modes is to be assessed, and the effective boundaries of market and private organizations defined. Fifth, cases of market and private failures, and the needs for public intervention are to be identified. Six, the alternative (and feasible) forms for public intervention in agrarian sector are to be identified, their comparative efficiency assessed, the best one(s) selected.

The major types transactions in farming are associated with: labor supply, supply of land and natural resources, service supply, inputs supply, knowledge supply and know-how, innovation supply, finance supply, insurance supply, marketing of services and products. Farmer also takes part in a great variety of "collective actions" for inducing public intervention in market and private sector in own interests.

Identification of employed and other feasible forms for organizations of transactions in different countries, regions, subsectors is object of a special micro-economic survey. For instance, major forms for organizations in functional areas of Bulgarian farms are summarized on Table 1.

Next, "critical dimensions" of transactions are to be determined – the factors responsible for the variation of transaction costs in the specific economic, institutional and natural environment. They are identified as: frequency of transactions between the same partners; uncertainty surrounding transactions; specificity of assets for supporting a particular transaction; appropriability of rights associated with transactions. First three factors are identified by Williamson while the forth one added by Bachev and Labonne.

When recurrence of transactions between the same partners is high, both (all) sides are interested in sustaining and minimizing costs of their relations (avoiding opportunism, building reputation, setting up incentive and adjustment mechanisms, conflict resolution devices). Here continuation of the relations with a particular partner is and designing a special mode for transacting has a high economic value. Parties restrain for opportunism which detection is "punished" by turning to a competitor (losing future business). Besides, costs for development of a special private mode for facilitating bilateral (or multilateral) exchange could be effectively recovered by frequent exchange. For instance, instead of negotiating milk marketing after "each milking" a long-term supply contract is signed; instead of negotiating labor remuneration "for each operation" a permanent labor is hired by the cooperative; economies of scale and size for repeated transactions are realized though participation in inputs supply or marketing cooperative. When a transaction is occasional (incidental) then possibility for opportunism is great since cheating side can not be easily punished (good reputation is not of value).

When uncertainty surrounding transactions increases, then costs for carrying out and secure transactions go up (for overcoming information deficiency, safeguarding against risk). Since bounded rationality is crucial and opportunism can emerge agents will use such modes of organization which diminish transaction uncertainty. While certain risks could be diminished/eliminated by production management or through market mode (purchase of insurance) most transacting risk would require special private forms – trade with origins; providing guarantees; using share-rent or output-based compensation; employing economic hostages (e.g. obligatory collateral for providing a credit); participating in inputs-supply or marketing cooperative; complete integration of transactions. When transacting

### Table 1. Principal forms of organizations for functional areas of Bulgarian farms

<table>
<thead>
<tr>
<th>Functional areas</th>
<th>Alternative modes of organisation</th>
<th>Special organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply of management</td>
<td>na</td>
<td>Cooperation Partnership</td>
</tr>
<tr>
<td>Supply of land and other natural resources</td>
<td>Purchase Short-term lease</td>
<td>Cooperation Partnership</td>
</tr>
<tr>
<td>Labor supply</td>
<td>Daily hire Seasonal hire</td>
<td>Partnership Cooperation</td>
</tr>
<tr>
<td>Supply of short-term material assets</td>
<td>Purchase with a spotlight contract Standard contract</td>
<td>Cooperation</td>
</tr>
<tr>
<td>Supply of long-term material assets</td>
<td>Purchase with a spotlight contract Standard contract</td>
<td>Partnership Cooperation</td>
</tr>
<tr>
<td>Service supply</td>
<td>Purchase with a spotlight contract Standard contract</td>
<td>Partnership Cooperation</td>
</tr>
<tr>
<td>Innovation and know-how supply</td>
<td>Purchase with spotlight contract Standard contract Free consultation in the farm advisory system</td>
<td>Cooperation</td>
</tr>
<tr>
<td>Financing</td>
<td>Bank loan Loan from an individual agent Loan from a private organization</td>
<td>Partnership Cooperation</td>
</tr>
<tr>
<td>Insurance</td>
<td>Purchase of insurance Purchase of &quot;assurance service&quot;</td>
<td>Cooperation</td>
</tr>
<tr>
<td>Marketing of products and services</td>
<td>Retail sale Wholesale trade Standard contract</td>
<td>Partnership Cooperation</td>
</tr>
</tbody>
</table>
between same counterparts is rare, and it is not supported by specific assets, and private appropriability of rights is high, then faceless market exchange is most efficient mode. Depending on the level of uncertainty and the risk-aversion agents take different entrepreneurial risk and get normal, lower, or higher return from transactions.

Transaction costs get very high when specific assets for relations with particular partner are to be deployed. In this case it is impossible to change partner (alternative use of assets) without big loss in value of specific capital. Relation specific/dependent investments are "locked" in transactions with particular buyer or seller and cannot be recovered (rented) through "faceless" market transactions (counterpart's "personality" matters). Costless alternative use of specific assets (loss of value) is not possible if transactions fail to occur, they are prematurely terminated, or less favorable terms are renegotiated (in contract renewal time before the end of life-span of specific capital).

Therefore, dependant investment/assets have to be safeguarded by special form such as long-term or tied-up contract, interlinks, hostage taking, joint investment, quasi or complete integration. Often, later is quite expensive, investment in specific capital are not made, and activity/transactions cannot take place (e.g. modern drop irrigation) or occurs without (or loss of) comparative advantages in regular activity (no specificity). If a high symmetrical (capacity, product, timing, location etc.) dependency of assets of counterparts exists (regime of "bilateral trade") there are strong incentives in both parties to elaborate special private mode of governance.

When unilateral (asymmetrical) dependency exists then dependent side (facing mini or total monopoly) has to protect investments against possible opportunism (behavioral uncertainty/certainty) through integrating transactions (unified organization, joint ownership, cooperative); or safeguarding them with interlinked contract, exchange of economic hostages, development of collective organization to outstand asymmetrical dependency (for price negotiation, lobbying for Government regulations).

Activity and transacting is particularly difficult when appropriability of rights on products, services or resources is low. "Natural" low appropriability has most of agrarian intellectual products - agro-market information, agrometeorological forecasts, new varieties and technologies etc. Besides, all products and activities with significant positive/ or negative externalities are to be included in this group. If appropriability is low possibility for unwanted market or private exchange is great, and costs for protection (safeguard, detection of cheating, disputing) of private rights/investments extremely high. For instance, fight against hail clouds or grasshoppers invasion are with a low appropriability for supplier since paying or not all farmers in the region benefit from the service. Investments in development of a new technology are with low appropriability since it could be "introduced" with one time purchase or acquired for free by a neighbor, friend in the research institute, or black market.

Because of the bounded rationality, the costs for protection, detection, verification, and a third-party (court) punishment of unwanted exchange extremely high. For transactions with low appropriability costs and benefits are independent for individual participants. Therefore, agents would either over-produce (negative externalities) or under-organize such activity (positive externalities) unless they are governed by efficient private or hybrid mode – cooperation, strategic alliances, long-term contract, trade secrets, or public order.

5. Effective forms for agrarian organizations

The next step is to evaluate the effective potential of alternative economic organizations: to minimize bounded rationality of agents and uncertainty surrounding transactions; appropriation and protection of absolute/contracted rights (and associated private benefits and investment) from possible opportunism; recover long-term costs for organizational development through high frequency of transactions; explore economy of size and scale on specific capital etc.

Individual organizations have different comparative advantages and disadvantages to maximize benefits and minimize costs of transactions with specific critical dimensions. In general, internal organization/integration has advantage for governing transaction with high uncertainty and specificity (dependency) of assets, since it diminishes bounded rationality and protects investments from outside opportunism. Contrary, transactions with high certainty (bounded rationality is not important) and universal character of assets (opportunism cannot be realized since transaction can be executed with another partner without additional costs) can be carried across free market without encountering costs for development of special private mode. Private organization is effective only for transactions with high recurrence between partners, since occasional (single) transactions do not let recovering ("payback") investment for development of special governance mode (mechanisms for coordination, stimulation, dispute resolution; formal registration).

Finally, markets and private forms are appropriate for transactions with high appropriability, since they would recover invested resources through exchange. For transaction with low appropriability private rights cannot be protected (wanted exchange) or they are enforced with extremely high costs. Thus, such transactions could be effectively governed either by hybrid (mixed public-private, quasi-public) or entirely public forms for organization.

Since transactions have different critical dimensions and governance forms have different comparative advantages it is to be "alignment of transactions (which differ in attributes) with governance structures (which differ in costs and competence) in discriminating (mainly transaction cost economizing) way" (Williamson, 1981).

According to the combination of specific characteristics of each activity/transaction, there will be different the most effective form of economic organization for that particular activity (Figure 1). Agrarian transactions with good appropriability, high certainty, and universal character of investments (partner can be changed anytime without significant costs) could be effectively carried across free market through spot-light or classical contracts. Here organization of transactions with special form or within farmfirm would only bring extra costs without producing any transacting benefits.

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5 E.g. investments in production of organic milk in Bulgaria are strongly specific for transactions with the single organic milk processor in the country.

6 Specificity is not technological but economic characteristic of investments. Depending on socio-economic conditions the same assets could be with quite different level of specificity.


Recurrent transactions with low assets specificity, and high uncertainty and appropriability, could be effectively governed through a special contract. Relational contract is applied when detailed terms of transacting are not known at outset (high uncertainty), and framework (mutual expectations) rather than specification of obligations is practiced. Partners restrict from opportunism and are motivated to settle emerging difficulties and continue relations (situation of frequent bilateral trade). Besides, no significant risk is involved since investments could be easily/costlessly redeployed to another use/users (no assets dependency exist). The special contract forms is also efficient for rare transactions with low uncertainty, high specificity and appropriability. Dependent investment could be successfully safeguarded through contract provisions since it is easy to define and enforce relevant obligations of partners in all possible contingencies (no uncertainty). Here occasional character of transactions does not justify internalization within the farm/firm.

Transactions with high frequency, uncertainty, assets specificity/dependency, and appropriability, have to be organized within the farm/firm (internal ownership mode). For instance, managerial and technological knowledge (acquaintance with livestock, quality of farming plots) is quite specific to farm, and its supply has to be governed through permanent labor contract and coupled with ownership rights (products, assets). Capital investments in land are to be made on owned/long-leased-in rather than seasonally rented land (high site and product specificity). All "critical" to farm material assets will be internally organized – production of forage for animals; important machineries; water supply for irrigated farming etc. While universal capital investments could be effectively financed by market form (bank credit), other cases, specific investments not made, and activity/restriction of activity fails to occur at effective scale ("market and contract failure"). Similar difficulties are encountered for rare transacting associated with high uncertainty and appropriability. In all these cases, a third-part (private, NGO, public) involvement in transactions is necessary (assistance, arbitration, regulation) in order to make them more efficient or possible. A particular trilateral mode is also invented such as the neoclassical contract which arranges "third party participation" and manages transactions with high uncertainty and asset specificity, and low frequency. The unprecedented development of special origins, organic farming, systems of "fair-trade" are good examples. There is increasing consumer's demand (premium) for organic, original, and fair-trade products. Nevertheless their supply could not be met unless effective trilateral governance including independent certification and control is put in place.

When appropriability associated with transaction/activity is low, there is no pure market mode to protect and carry out activity effectively. Respecting others rights (unwanted exchange avoided) or "granting" additional rights to others could be governed by "good will" or charity actions of individual and NGOs. For instance, a great number of voluntary environmental initiatives have emerged driven by the competition, farmers' preferences for eco-production, or responds to public pressure for a sound eco-management. In any case, voluntary initiatives could hardly satisfy the entire social demand especially if they require significant costs.

Some private modes could be employed if high frequency and mutual assets dependency exists such as unwritten accords, interlinking, bilateral or collective agreements, close-membership cooperatives, codes of professional behavior, alliances, internal organization. However, emerging of special (private) large-members organizations for dealing with low appropriability (and satisfying entire "social" demand) would be very slow and expensive, and they unlikely be sustainable in long run (free riding). Therefore, there is a strong need for third-party public intervention in order to make such activity possible or more effective – public organization, public contract, mandatory taxing, introduction of new property rights.

For example, the supply of "environmental goods" by farmers could hardly be governed through private contracts

<table>
<thead>
<tr>
<th>Critical dimensions of transactions</th>
<th>Appropriability</th>
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<tr>
<td>Assets Specificity</td>
<td>High</td>
<td>Low</td>
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<tr>
<td>Low</td>
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<tr>
<td>Uncertainty</td>
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<td>Frequency</td>
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Table 1. Principle modes for governing of agrarian transactions

\( \text{Y} \) – the most effective mode; \( \text{b} \) – necessity for a third party involvement
with individual consumers because of low appropriability, high uncertainty, and rare character of transacting (high costs for negotiating, contracting, charging potential consumers, disputing). The supply of environmental protection service is very costly (production and organization costs), and would unlikely be carried out on voluntary basis. Financial compensation of farmers by willing consumers through pure market mode (tax, premium) is also ineffective due to high information asymmetry and massive enforcement costs. A third-party mode with direct public involvement would make that transaction effective: on behalf of consumers a State agency negotiates with individual farmers a public contract for "environment conservation service" , coordinates activities of various agents (including direct production management), provides public payments for compensation of farmers, and controls implementation of negotiated terms 7.

6. Economic boundaries of the farm and agrarian organizations

The next step is to identify the range of feasible organizational forms for each generic mode for the specific context of a particular country, region, subsectors, and agent. For instance, specific varieties of the "internal organization" in agriculture includes: one-person farm or firm, family farm or firm, group farm or firm (partnership), cooperative, corporation, public farm or firm, joint venture. Corresponding forms of the "free market" are: spot exchange on local, regional etc. markets; classical contract, wholesale trade etc. The "special contract form" could be: short-term contract, long-term contract, relational contract, interlinked organization, multilateral agreement etc. For completing the list of alternative organisational forms in each generic type a special micro-economic survey is needed.

After that it could be determined the effective (horizontal and vertical) boundaries of individual forms on the basis if their potential to: overcome bounded rationality and transaction uncertainty, safeguard transactions and investments from the hazard of opportunism, realized economies of scale/size of specialized and specific capital, and minimized overall (production and transaction) costs. Achieving the efficiency though increasing productivity/benefits and the transaction costs for each form will be quite different in the specific institutional, economic and natural environment for agents with unlike characteristics and activity/transactions with specific combination of critical dimensions. Therefore, individual organizations will have quite different efficiency and effective boundaries. A part of agrarian transactions will be effectively governed through free market exchange; another part will be effectively organized through special contract mode(s); a part of transactions will be entirely integrated within farms of different types, while the rest protected though special private organization(s) outside of farm gates.

Detailed analysis of factors, pace of development, efficiency and economics boundaries of farms and agrarian organizations of different type during transition and EU integration in Bulgaria is done by us in previous publications (Bachev, 2010a,b). For instance, the high efficiency and sustainability of numerous small (subsistent, semi market and market) farms is "explained" with the absence of one or more feasible or more-effective alternative for production utilization of available household resources (labor, savings, farmland) in the condition of not-fully restituted private rights on resources; high uncertainty, risk and costs for market and contract transactions (lack of experience, trust, markets, financing; not-working system for enforcement of laws and contracts); lack of public support; insufficient or missing possibilities for alternative employment and/or supply with (cheap, quality) foods. 8

Similarly, "dynamic" development of many-members agricultural cooperatives during post-communist transition is a consequence of the fact that they are the single/most effective form for organization of a great part of activity (joint cultivation, plat protection, irrigation, harvesting; non-profit organization for supply of highly specific for members employment, foods, services, feeds for domestic/private farm livestock) in the conditions of unidentified rights on major agrarian resources, lack of possibilities (skills, financial means, time, advanced age) for organization of own farm, inherited high inter-dependency of available specialized capital of large number individuals, and undeveloped labour market, agrarian resources and main activities (services, processing, trade) in rural areas.

In the same way, the unprecedented concentration of resources and activities in a few thousands large business agri-firms is a result of the dynamic institutional environment favorable for integration of huge specific capital by entrepreneur (technological and managerial knowledge, personal connections, available combination of and/or complementarities of partners assets) allowing exploration of enormous (land consolidation, economies of size and scale, cheap and standardized products) and transaction advantages (contract and political power, preferable counterpart by large suppliers and buyers, possibilities to collect information, introduction of innovations, diversification, products promotion, adaptation to market and formal requirements, winning public projects and subsidies, risk taking, investing in good reputation and relations with partners, banks, research institutes, and public authorities).

At this stage a qualitative analysis is made on the comparative efficiency of diverse type of farms and agrarian organizations in the specific socio-economic, institutional and natural environment. It is often impossible to compare production and transaction costs in a qualitative term, but such "calculation" is always done by the business managers and other economic agents. Also an answer is given to the "paradox" why a big farm cannot do the same and more then a number of small farms can do, and vice versa. Furthermore, it becomes clear inadequacy of indicators for productivity of production costs and resources for assessing efficiency of the different agrarian organizations. The opposite is to be expected: it has to be significant variation in the rate of profitability on investments in agro-firm (profit-making organization) from "pay-back" of expenditures and resources in cooperative (member-oriented organization), public farm (non-profit organization) or subsistence farm (giving opportunity for productive use of otherwise "non-tradeable" family labor, land). The later is also proven by the estimates on "efficiency" of different farms in East Europe after 1989 (Csáki and Lerman; Gortova and Davidova; Mathijs. and Swinnen).

Traditional statistical and other data are less suitable for testing and wide application of the new approach. It is necessary to collect micro-economic data for divers transaction managed by various agrarian agents and their critical dimensions. Such information can be collected though organizing interviews with managers of different type farms and the experts in the area.

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7 Namely public eco-contracts with farmers are widely used in countries of European Union.

8 Even now the most of holdings in the country are subsistent or semi-market, and agriculture is a "supplementary income source" for more than 1 million Bulgarians (MAF, 2008).

9 Restituted widely dispersed small-scale land plots, farmland within a large plot with permanent crops, physically "indivisible" shares in assets of ancient farms, accumulated experience and narrow labor specialization for "collective" production.
7. Needs and effective forms for public intervention

The recognition of transaction costs has also a number of important policy implications related to economic needs and efficiency of public intervention in agrarian sector:

First, public (government) role is to establish organizations facilitating and intensifying market and private transactions and minimizing related costs – for identification, protection, and disrupting individual absolute and contracted rights (e.g. notary register, court, police etc.); quality, labour, environmental etc. standards; appropriate market infrastructure (wholesale markets, market and price information) etc.

Second, when a high level of costs for market and private transactions (which prevent or entirely block development of effective market and private forms) is observed then public (government) is to intervene to make that socially desirable activity (and exchange) possible or more efficient.

Third, different forms of public intervention (assistance, regulations, funding, provision, partnership) are not with equal efficiency since they have different potential to deal with the specific market and private sector failures and command different (implementation and transaction) costs. Thus, the comparative efficiency of feasible forms of public intervention is to be assessed and the most efficient one selected.

Forth, "market failure" does not automatically imply a public intervention. There are numerous private and collective forms which effectively overcome market deficiency. When there is a situation of market and private sector failure there is a need for public intervention. However, public involvement in market and private activity is to be undertaken only if there is a net benefit (saving on transaction costs) compared to total costs of public intervention. Therefore, the choice is always between practically available "imperfect social arrangements".

Finally, "public failure" is a feasible outcome and when there is a need for public intervention the induced public organization is not always efficient due to misuse of power by certain groups, bad design, mismangement etc.

The Comparative structural analysis let specify existing and emerging deficiencies in organization of market and private transactions, and define the needs for public intervention in agrarian sector ("the economic role of government").

In modern agriculture there are always some public modes put in place along with diverse market and private organizations, and ideally it could be a case of most effective/perfect economic governance of the sector. However, usually there are a number of social, economic, environmental etc. challenges (problems, conflicts, failures, risks) associated with agrarian development. That is why, there is a constant need for improvement of public organization.

In the beginning assessment on correspondence of public involvement to real needs of development – these are identified needs for a third-party intervention from Figure 1. The analysis is to embrace the efficiency of entire system of governance, and identify deficiencies (failures, risks) in market, private, and public organizations. Next, variety of alternative modes for new public intervention able to correct market, private and public failures have to be identified, and their comparative efficiency assessed, and most efficient one(s) selected. Finally, assessment is to be made on comparative efficiency of selected public form to other practically possible modes of governance such as partnership with private sector, fundamental property rights modernization, international cooperation etc. Accordingly, a new public intervention is to be initiated only if there is overall net benefit – when effects are greater than additional (individual and social) costs for third-party public involvement.

The comparative efficiency of public interventions is to be determined in terms of the potential for coordination, stimulation, conflicts resolution, and minimization of (transaction) costs. Public modes not only assist (market and private) transactions, but also are associated with significant (social and private) costs. It is essential to compare practically (technically, economically, socially) possible and alternative forms of governance. Additional benefits (problems to be solved, risks to be overcome, new goals to be achieved), and costs, and modes for new public intervention must be socially acceptable. If different forms permit achieving the same goals, then the analysis is to focus on selection of mode minimizing total (implementing and transacting) costs. If there is only one feasible form for governing of a particular intervention, it will be introduced if associated costs are socially acceptable and possible.

Assessment is to comprise all costs – direct (tax payer, assistance agency) expenses, and transacting costs of bureaucracy (for coordination, stimulation, mismanagement), and costs for individuals’ participation and usage of public modes (expenses for information, paper works, payments of fees, bribes), and costs for community control over and for reorganization of bureaucracy (modernization and liquidation), and (opportunity) costs of public inaction.

Depending on uncertainty, frequency, and necessity for specific investment of public involvement, there will be different the most effective forms (Figure 2). Generally, interventions with low uncertainty and assets specificity would require smaller public organization (more regulatory modes; improvement of general laws and contract enforcement). When uncertainty and assets specificity of transactions increases a special contract mode would be necessary – employment of public contracts for provision of private services, public funding/subsidies of private activities, temporary labor contract for carrying out special public programs, leasing-out public assets for private management etc. When transactions are characterized with high assets specificity, uncertainty and frequency then internal mode and bigger public organization would be necessary – permanent public employment contracts, in-house integration of crucial assets in a specialized state agency or public company etc.

<table>
<thead>
<tr>
<th>Level of Uncertainty, Frequency, and Assets specificity</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>New property rights and regulations</td>
<td>New regulations</td>
<td>New taxation</td>
</tr>
<tr>
<td>New assistance</td>
<td>New public provision</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 2. Effective modes for public intervention in agrarian sector

Initially, existing and emerging problems (difficulties, costs, risks, failures) in organization of market and private transactions have to be specified. The appropriate public involvement would be to create environment for: decreasing uncertainty surrounding market and private transactions, increasing intensity of exchange, protecting private rights and investments, and making private investments less dependent. For instance, State establishes and enforces quality, safety and eco-standards, certifies producers, regulates employment relations, transfers management rights on natural resources etc., and all that facilitates and intensifies (market and private) transactions and increases the efficiency of economic organizations.
Next, practically possible modes for increasing appro-
riability of transactions have to be considered. For in-
stance, there are a great variety of possible ways for public inter-
ventions in agrarian eco-activity (Table 2).

**Table 2. Effective modes for public intervention in agri-eco-transactions***

<table>
<thead>
<tr>
<th>New property rights</th>
<th>Regulations</th>
<th>Taxes</th>
<th>Assistance and support</th>
<th>Public provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rights for clean, beautiful environ-</td>
<td>Regulations for organic farming; Quotas for emis-</td>
<td>Tax rebates, exception, and breaks;</td>
<td>Recommendation and information;</td>
<td>Research and development;</td>
</tr>
<tr>
<td>ment, biodiversity;</td>
<td>sions, and use of products and resources;</td>
<td>Environmental taxation on emissions</td>
<td>Demonstration;</td>
<td>Extension and advise;</td>
</tr>
<tr>
<td>Private rights on natural, biologi-</td>
<td>Regulations for introduction of foreign species,</td>
<td>or products (pesticides, fertil-</td>
<td>Direct payments and grants for environmental</td>
<td>Agro-market and know-how information;</td>
</tr>
<tr>
<td>cal, and environmental resources;</td>
<td>and use of GM crops; Bans for certain activity,</td>
<td>izers); Levies on manure surplus;</td>
<td>actions of farms, farmers and community organi-</td>
<td>Agro-meteorological forecasts;</td>
</tr>
<tr>
<td>Private rights for (non) profit man-</td>
<td>and use of some inputs and technologies;</td>
<td>Tax or levies schemes on farming or</td>
<td>zations, businesses; Preferential credit pro-</td>
<td>Sanitary and veterinary control, vaccina-</td>
</tr>
<tr>
<td>agement of natural resources;</td>
<td>Norms for nutrition and pest management;</td>
<td>export for funding innovations and</td>
<td>grams; Public environmental contracts;</td>
<td>tion, prevention measures;</td>
</tr>
<tr>
<td>Tradable quotas (permits) for pollu-</td>
<td>Regulations for water protection against pollution</td>
<td>extension; Waste tax</td>
<td>Government purchases (water and other limited</td>
<td>Specialized public agency (company) for</td>
</tr>
<tr>
<td>ting; Private rights on intellectu-</td>
<td>by nitrates; Regulations for biodiversity and</td>
<td></td>
<td>resources); Financial and price support for</td>
<td>important ecosystems;</td>
</tr>
<tr>
<td>al agrarian property, origins, (pro-</td>
<td>landscape management; Regulations for trading of</td>
<td></td>
<td>organic and eco-production, and special</td>
<td>Pertaining &quot;precaution principle&quot;</td>
</tr>
<tr>
<td>tecting) ecosystem services; Rights</td>
<td>protection of ecosystem services; Licensing for</td>
<td></td>
<td>origins; Funding of environment and management</td>
<td>Eco-monitoring; Eco-foresight; Risk</td>
</tr>
<tr>
<td>to issue eco-bonds and shares; Priv-</td>
<td>water and agro-system use; Quality and food safe-</td>
<td></td>
<td>training programs; Assistance in farm and</td>
<td>assessment</td>
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<tr>
<td>ate liability for polluting</td>
<td>ness standards; Standards for good farming prac-</td>
<td></td>
<td>eco-associations; Collecting fees for paying</td>
<td></td>
</tr>
<tr>
<td></td>
<td>tices; Mandatory (environmental) training; Certi-</td>
<td></td>
<td>eco-system service providers</td>
<td></td>
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<tr>
<td></td>
<td>fications and licensing; Compulsory environmen-</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>tial labeling; Designating environmental vulnera-</td>
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<tr>
<td></td>
<td>ble and reserve zone; Set aside measures; Inspec-</td>
<td></td>
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<td></td>
<td>tions; fines and, ceasing activities</td>
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</tbody>
</table>

* The environmental transactions are associated with respecting the environmental rights and improving the environmental performance of individual agents.

The low appropriability is often caused by unspecified or badly specified private rights. In some cases, most effective government intervention would be to introduce and enforce new private property rights – on natural and biological resources; tradable quotas for products, inputs, emissions; intellectual property and origins. That is efficient when privatization of resources or introduction and enforcement of the new rights is not associated with significant costs (uncertainty, recurrence, and level of specific investment are low). That intervention transfers organization of transactions into market and private governance, liberalizes market competition and induces private incentives (and investments) in certain agrarian activities.

In other instances, it is more efficient to put in place regulations for trade and utilization of resources, products and services – standards for labor (safety, social security), product quality, environmental performance, animal welfare; norms for using natural resources, introduction of foreign species and GM crops, and (water, soil, air, comfort) contamination; ban on application of certain chemicals or technologies; regulations for trading ecosystem service protection; foreign trade regimes; mandatory eco-training and licensing of farm operators.

In other instances, using incentives and restrictions of tax system is the most effective form for intervention. Different sorts of tax preferences are widely used to create favourable conditions for development of certain (sub)sectors and regions, forms of organization, segment of population, or types of activities. For instance, environmental taxation on emissions or products (inputs, outputs of production) is applied to reduce use or emissions of harmful substances.

In some cases, public support to private organizations is best mode for intervention. Agrarian and rural development, environmental conservation and trans-border cooperation programs are widely used in all countries. Often providing public information, recommendations, and training to farmers, rural population, and consumers is the most efficient form. In some cases, pure public organization (in-house production, public provision) is the most effective as in case of important agro-ecosystems and national parks; agrarian research, education and extension; agro-meteorological forecasts; border sanitary and veterinary control etc.

Usually, specific modes are effective if they are applied alone with other modes of public intervention. The necessity of **combined intervention** (governance mix) is caused by: complementarities (joint effect) of individual forms; restricted potential of some less expensive forms to achieve certain (but not entire) level of socially preferred outcome; possibility to get extra benefits (e.g. “cross-compliance” requirement for participation in public programs); particularity of problems to be tackled; specific critical dimensions of governed activity; uncertainty (little knowledge, experience) associated with likely impact of new forms; administrative and financial capability of Government to fund, control, and implement different modes; and dominating policy doctrine.

The level of effective public intervention (governance) also depends on the **kind of problem**, and **needs for collective actions**. There are public involvements which are to be executed at **local** (ecosystem, community, regional) level, while others require **nationwide governance**. And finally, there are activities, which are to be initiated and coordinated at **international** (regional, European, worldwide) level due to strong necessity for trans-border actions (needs for cooperation in natural resources management, exploration of economies of scale and scale, governing of spill-overs) or consistent (national, local) government failures. Very frequently effective governance of many problems and risks requires multilevel governance with system of combined actions at various levels involving diverse range of actors and geographical scales.

The public (regulatory, provision, inspecting) modes must have built mechanisms for increasing competency (decrease bounded rationality, powerlessness) of bureaucrats, benefi-
cies, interests groups and public as well as restricting possible opportunism (cheating, interlinking, abuse of power) of public officers and stakeholders. That could be made by training, introducing new assessment and communication technologies, increasing transparency (independent assessment and audit), and involving experts, beneficiaries, and interests groups in management of public modes at all levels. Furthermore, applying "market like" mechanisms (competition, public auctions) in projects design, selection and implementation also increase incentives and decrease overall costs. The pure public organization should be used as a "last resort" when all other modes do not work effectively (Williamson, 1996). "In-house" public organization has higher (direct/indirect) costs for setting up, running, controlling, reorganization, and liquidation. Unlike market and private forms there is not automatic mechanism (competition) for sorting out less-effective modes. Here public "decision-making" is required which is associated with high costs and time, and it is influenced by strong private interests (lobbying groups, policy makers and associates, bureaucrats) rather than efficiency. What is more, widespread "inefficiency by design" of public modes is practiced to secure (rent-taking) positions of certain interest groups, stakeholders, bureaucrats. Along with development of general institutional environment ("The Rule of Law", transparency) and measurement, communication etc. technologies, the efficiency of pro-market modes (regulation, information, recommendation) and contract forms would get bigger advantages over internal less flexible public arrangements.

The hybrid modes (public-private partnership) are much more efficient than pure public forms given coordination, incentives, and control advantages. Involvement of farmers, beneficiaries and interest groups increases efficiency, decreases asymmetry of information, restricts opportunisms, increases incentives for private costs-sharing, reduces management costs. That is determined by farmers information superiority, strong interlinks of activity with traditional food production (economy of scope), high assets specificity to farm (farmers competence, high cite-specificity of investments to farm, land, eco-system), spatial interdependence (need for cooperation of farmers at ecosystem or regional level), farm's origin of negative externalities. For instance, enforcement of most labor, animal welfare, environmental standards is often very difficult or impossible. Stimulating and supporting (assisting, training, funding) private voluntary actions are much more effective then mandatory public modes in terms of incentive, coordination, enforcement, and disputing costs.

If there is strong need for third-party public involvement but effective (government, local authority, international assistance) intervention is not introduced in a due time, agrarian "development" is substantially deformed. The public (Government) failure is also possible and often prevails. In Bulgaria, there have been a great number of bad examples for public under- and over-interventions in agrarian sector during post-communist transition now. Consequently, primitive and uncompetitive small-scale farming; predominance of over-integrated and personalized exchanges; ineffective and corrupted agrarian bureaucracy; blocking out all class of agrarian transactions (innovation and extension, supply, long term credit supply, supply of infrastructure and environmental goods); and developed large informal sector, all they come out.

The comparative analysis let us improve design of new forms of public intervention according to specific market, institutional and natural environment of a particular country, region, sub-sector, and in terms of perfection of coordination, adaptation, information, stimulation, restriction of opportunism, controlling of participating actors (decision-makers, implementers, beneficiaries, other stakeholders). It unable us to predict likely cases of new public (local, national, international) failures due to impossibility to mobilize sufficient political support and necessary resources and/or ineffective implementation of otherwise "good" policies in specific economic and institutional environment of a particular country, region, sub-sector. Since public failure is a feasible option it timely detection permits foreseeing the persistence or rising of certain problems in agrarian development, and informing (local, international) community about associated risks.

Conclusion

In the unreal economy "without institutions and transaction costs" the theory of agrarian organization is very simple – there is no economic need for organizations. There is a single mechanism for governing organizing, coordinating, and stimulating the entire economic activities – the free market. "Situation of efficiency" is easily achieved since agrarian agents (individuals, households, firms) automatically and costlessly adapt behavior according to movements of market prices and changes in production technologies. In the real agrarian economy with diverse agents, institutions and transaction costs there is place for other effective (non-market) modes for organization – farms of different types and sizes, contracts, public and hybrid forms. "The old" problem of efficiency founds a "new" dimension through incorporation into analysis of the costs of transacting as the accent is put on assessment of the comparative efficiency of all (rather then only a part) of alternative modes for economic organization. It also becomes absurd the traditional "black box" approach in analysis of governing structures and the productivity as a sole indicator for efficiency of different type of farms.

Suggested new framework helps us better understand the factors for organizational choice and efficiency, and needs for public intervention in agrarian sector. The analysis of transaction costs identifies immense range of "market failures" associated with badly specified property rights and inefficient system for their enforcement; the high uncertainty and dependency of activity, low appropriability etc. Private agents "deal" with market deficiency developing different non-market forms for effective governance such as contracts, internal modes, trilateral private organization, collective actions. Private sector also "fails" to safeguard individual rights and carry out certain activities at effective scale (technological development, eco-management). There is strong need for a third-party public involvement in market and private transactions though institutional modernization, assistance, regulation, hybrid or in-house public organization. Diverse forms of public interventions are with unequal efficiency in the specific environment of individual countries, regions, and sectors, and the most efficient ones are to be selected taking into account the transaction costs and contribution to sustainable development. The "public failure" is also possible, and inappropriate involvements, under- or over-regulations, mismanagement, corruption are widespread. Agrarian sustainability is compromised when market and private sector fails, and no effective public intervention takes place – imperfect institutional structure is not reformed, delayed or bad government interventions prevail, fruitless international assistance dominate, and needed global government is not established.

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НОВІ ІНСТІТУЦІЙНО-ЕКОНОМІЧНІ СТРУКТУРИ, ЩО ВИКОРИСТОВУЮТЬСЯ ДЛЯ ОЦІНЮВАННЯ І ПОКРАЩЕННЯ СІЛЬСЬКОГОСПОДАРСЬКИХ ОРГАНІЗАЦІЙ

Анотація. У статті розглянуто внутрішньодисциплінарну інтеграцію ново-інституційної економіки та економіки трансакційних витрат. Запропоновано цей підхід для оцінки ефективності фермерських господарств та сільськогосподарських організацій. Наш новий підхід включає в себе: визначення форм і сільськогосподарських організацій, як економічних суб'єктів, в тому числі, і фірм, як виробнича структура; оцінку порівняльної ефективності альтернативних ринкових, контрактних, внутрішніх, гібридних моделей управління; аналіз рівня трансакційних витрат та їх інституційних, поведінкових, виміри, технологічних та природних факторів; визначення критеріїв ефективності форми і її ефективних умов використання економічнічної ролі держави і потреби державного регулювання в аграрному секторі.

Ключові слова: ефективність фермерських організацій та сільськогосподарських організацій; ринок, підприємство, державне управління.

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НОВЕ ІНСТІТУЦІЙНО-ІНСТИТУЦІЙНО-ЕКОНОМІЧНІ СТРУКТУРЫ, ИСПОЛЬЗУЕМЫЕ ДЛЯ ОЦЕНИ И УПЛОЩЕНИЯ СЕЛЬСКОХОЗЯЙСТВЕННЫХ ОРГАНИЗАЦИЙ

Аннотация. В статье рассмотрена внутрдисциплинарная интеграция ново-институциональной экономики и экономики трансакционных издержек. Предложен новый подход для оценки эффективности фермерских хозяйств и сельскохозяйственных организаций. Наш новый подход включает в себя: определения форм и сельскохозяйственных организаций, как экономических субъектов, в том числе, и фирм, как производственную структуру; оценку поряночной эффективности альтернативных ринковых, контрактных, внутренних, гибридных моделей управления; анализ уровня трансакционных издержек и их институциональных, поведенческих, измерительных, технологических и природных факторов; определение критериев эффективности формы и ее эффективных условий; определение экономической роли государства и потребности государственного регулирования в сельском секторе.

Ключевые слова: эффективность фермерских организаций и сельскохозяйственных организаций; рынок, частное и государственное управление.

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FINANCIAL MECHANISM OF THE INNOVATIVE ACTIVITY IN THE REPUBLIC OF KAZAKHSTAN

This article considers the theoretical and practical issues of development of the financial mechanism of innovation activity in the Republic of Kazakhstan. Identified current conditions and preconditions of development of the existing financial mechanism of innovation activity. Proposed to use a multi-channel system of financing of science and innovation in Kazakhstan which based on the active involvement of the private and non-budgetary funds.

Keywords: financial mechanism of development innovation, science and innovation in Kazakhstan, a multi-channel system of financing innovation.

Problem statement. As shows world experience, stable economic growth can be reached only on an innovative basis, in case of active use of modern scientific and technical achievements. Only in this case we can have the chances of high quality of growth, resource-saving, production efficiency, release competitive in the domestic and world markets of products are implementable. However the sum of domestic innovative enterprises is not rise and even falls. And no wonder that in the country few samples of new equipment are created with use of licenses, patents and other legal remedies of objects of intellectual property. It should be noted that many of these objects don't find application in production, morally grow old and depreciate. In this regard, the special importance is purchased by a problem of creation of the complete financial mechanism of implementation of priorities of innovative policy in Kazakhstan.

Analysis of the last researches and publications. Theoretical and practical aspects of forming and development in Kazakhstan industrial and innovative development of the financial mechanism of innovative activities adequate to requirements, regarding need of development of national innovative system were considered in publications of the Russian scientists of S. Yasin [1], L.Gokhberg [2], U.Baymuratov [3] Kazakhstan scientists, M. Kenzheguzin [4], F.Dnishev [5], A.Taubayev [6], however directly financial mechanism of innovative activities it wasn't offered.

Selection of the unsolved aspects of the problem. Without reliable financial base, stable sources and efficient financial incentives innovative projects and programs remain at level of ”paper projects”. By and large, in modern Kazakhstan still is absent, as such, innovative strategy and tactics, not to mention financial side of innovative policy.
Now is the time to develop and implement a long-term science-based innovation policy and an effective financial mechanism for its implementation, because the current system of internal financing and investment (capital) costs of scientific and innovative activity does not meet the priorities of the State Program of Forced Industrial-Innovative Development of Kazakhstan [7].

The purpose of the study of the financial mechanism of innovative activities consists in development of adequate mechanisms of providing by financial resources of the sphere of research projects and their implementations which provide industrial and innovative development of Kazakhstan.

Main results of research. The current status of innovative system of Kazakhstan is characterized by the following quantitative and qualitative indexes which is given in table 1. Despite considerable positive dynamics of quantitative indices as gross domestic product, the amount of financing of development costs and research, the number of the organizations and the personnel, engaged in researches and developments and the relative indicator of a ratio of costs for science and an innovation to gross domestic product has a downward tendency, and 6 times below than recommended value of 1%.

Table 1. Dynamics of indicators of functioning of the scientific and innovative sphere of the Republic of Kazakhstan

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2005</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>KZT</td>
<td>KZT</td>
<td>KZT</td>
</tr>
<tr>
<td>Gross domestic product billion KZT</td>
<td>2599,9</td>
<td>18292,41</td>
<td>7457,1</td>
</tr>
<tr>
<td>Domestic expenditure on research and development in current prices, KZT millions</td>
<td>4706,8</td>
<td>33,12</td>
<td>21527,4</td>
</tr>
<tr>
<td>Number of the organizations which were carrying out researches and developments</td>
<td>257</td>
<td>390</td>
<td>412</td>
</tr>
</tbody>
</table>

Table 1 (cont)

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2005</th>
<th>2011</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>KZT</td>
<td>KZT</td>
<td>KZT</td>
</tr>
<tr>
<td>The number of the personnel occupied with researches and developments (on the end of the year), the person</td>
<td>14756</td>
<td>18912</td>
<td>18003</td>
</tr>
</tbody>
</table>

Source: [8, 9]

In such a way, the scale and a condition of financing modern Kazakhstan innovations in the industry are that budget financing isn't able to solve this main economic problem [10]. Company to ensure are interested its own survival and effective functioning of the interest in multi-channel sources of investment support. Resource support of innovative technology development of the industry can be performed at the expense of attraction both budget, and extrabudgetary funds, including:

- allocation of budgetary funds to the state customers of the knowledge-intensive products with a complete right of disposal of the grants from the limits of the relevant articles of the budget;
- attraction and use by state bodies of the centralized off-budget funds formed for an acquisition account from the entities in case of accounting of centralized contributions in the prime cost the relevant products, other off-budget sources:
  - attraction of financial assets foreign customers of products enterprises;
  - attraction commercial (including foreign) investments and the credits, including on the basis of the state guarantees to investors;
  - attraction of means of domestic individual entrepreneurs;
  - attraction of others, established by the legislation of Kazakhstan, borrowed funds.
All but the last, sources of the income are commercial and additional to the amounts of financing of the state order.

It should be noted that application of all listed sources of the income in a bigger measure is applicable to operating plants and is impracticable for creation of new productions of the knowledge-intensive products. Today for innovative technology development of industries it is possible to resort to external financing. The majority of the investors, aiming to enclose the financial resources in successfully developing Kazakhstan productions, are guided by search of projects in various sectors of economy. At present time managers of the entities use only 3 possible types of external financing:

- credit financing;
- direct investments of the relevant funds;
- leasing.

In case of credit financing there is a question of availability of property which will act as the guarantor of repayment of the loan, i.e. mortgage property. Besides, it is necessary to extinguish regularly percent, and also to pay the main amount of debt. As a result, there is a big risk not pay back of the credit and total loss of mortgage property in case of unsuccessful succession of events. In addition, it should be noted that more willingly issued to the enterprises producing raw materials or export-oriented industries (the proportion of loans in the period 2001-2010 amounted to about 75%). Really to assume that banks of the second level will reluctantly go on financing of the risk (venture) projects connected with production of high-technology, knowledge-intensive products [7].

The second option (direct investments in exchange for a share in property) can be, in our opinion, more preferable to the majority of the manufacturing entities of the of high technology products, though more unexpected. The advantages of this method of lending may be the following:

1) All investment risks takes on a new partnership fund.
2) There is no need of return of the credit and percent.
3) The entity receives additional financial resources for development and strengthening of the line item in the market. Besides there is a number of benefits of partnership with known western fund, fund of European Bank of Reconstruction and Development. Additional financial resources – a high guarantee of fast development of production, competitiveness and gain increase in a short space of time the maximum number of consumers.
4) The presence of the international relations of the investor allows to use as much as possible new opportunities (possibility of receipt of additional sources of financing under guarantees of the western investor).
5) Receipt of additional technical support, grants.
6) Value addition of shares (for joint-stock companies). Sales opportunity of own shares on a high price – a resource for development of new projects in the future.
7) Forming of the corresponding corporate culture in the course of work with the investor.

Why the Kazakhstan enterprises sometimes avoid cooperation with investment funds? There are some objective reasons which we have arranged in order of their ponderability:

1) The management of the entity doesn’t possess information on the present possibility of expansion of production.
2) The management of the entity has no corresponding practice of communication with the western funds. In these cases it is recommended to address to services of the professional consulting firms which are engaged in the organization of negotiation process between the entity and funds.
3) Assessment of a share of fund in the entity. There is a need to carry out methodologically reasonable independent project evaluation.
4) There are own sources of financing. The question of attraction of external means doesn’t arise at all though it is necessary to analyse alternative options.

Benefits of involvement of the consulting companies are obvious:

First, the fund receives information about the company from the third party, i.e. the so-called buffer zone between the entity and the potential investor is created. It assumes, on the one hand, elimination of information undesirable to the investor, on the other hand, the correct interpretation of requirements of fund to the project. Professional analysts carry out the financial and investment analysis of projects. Thus they use techniques which are borrowed from the western practice. It is necessary to develop financial model for an efficiency evaluation of a choice of this or that option taking into account requirements and methodology of potential investors.

Secondly, the financial model is the flexible tool, allowing to design various options of development. At the exit it is possible to see comparable results and to estimate feasibility of these or those management decisions.

Thirdly, the value assessment of business and reasons for calculations by independent experts has great value. The business value assessment by techniques of the western funds will allow to initiate process of attraction of direct investments in case of further work in this direction.

Also in case of attraction of direct investments the competent organization of negotiation process substantially influences an optimality of conditions of occurrence of the investor in business and its exit in case of the termination of term of the contract.

Some venture capital funds from the list also have indisputable advantages (investment at the initial stage of production, availability of a work experience in Kazakhstan, etc.) especially as the current legislation allows to pass to legal entities a re-registration with change of pattern of ownership, a form of business, the size of the authorized capital, etc. That is the decision on attraction of direct investments in innovative technology development of industries by cooperation with an investment fund, also as well as a choice of the relevant fund depends on strategy of the specific entity which chooses a management [11].

An important issue in the implementation of the financial mechanism of innovation and technological development of the industry in addition to funding sources is accounting features of the processes of research, development, creation and mass dissemination of innovations.

Depending on these features, there are possible significantly various forms of financing. They are distinguished by extent of communication of financing of works with the end results of scientific and technical researches.

The first. The most rigid form, can assume payment for only end result ("result – payment"). However, not all development, without speaking about theoretiico-applied, basic and basic researches, come to an end successfully that is connected with specifics of scientific work and existence of uncertainty of the purposes expected results natural to scientific activity, ways and means of their achievement.

As approaching closing stages of a cycle of scientific and technical research and a materialization of new knowledge, level and nature of uncertainty decreases. By purchasing a lot of risk they become measurable and dependent on economic (resources, duration) and technical (the technical level of innovation, the level of consumer properties) indicators. However, the neglect of this feature, which is characteristic of the initial stages of the cycle, and the application to them of the most severe forms of funding will inevitably force researchers and developers to reduce neglect risk, both at the stage of signing the contract with the customer, and in
ability of cash reserves and solvency. Therefore the main challenge of innovation and technological development of the industry in the current economic situation is to find and efficient allocation of resources, primarily investments in their broadest sense (financial assets, securities, technology, equipment, company, licenses, property or property rights, intellectual values invested in the business and other activities for profit (income) and achieve a positive social effect).

Thereby, the successful implementation of the financial mechanism involves the efficient use of existing sources of financial and account of characteristics of the process of creating and implementing innovations.

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ФІНАНСОВИЙ МЕХАНІЗМ ІННОВАЦІЙНОЇ ДІЯЛЬНОСТІ В РЕСПУБЛІЦІ КАЗАХСТАН

Розглянуті теоретичні та практичні питання розробки фінансового механізму активізації інноваційної діяльності в Республіці Казахстан. Визначено поточні умови і передумови розвитку існуючого фінансового механізму інноваційної діяльності. Запропоновано використовувати багатоканальну систему фінансування науки та інновацій в Казахстані, на основі активного залучення приватних і позабюджетних фінансових ресурсів.

Ключові слова: фінансовий механізм розвитку інновацій, наука та інновації в Казахстані, багатоканальна система фінансування інновацій.

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ФИНАНСОВЫЙ МЕХАНИЗМ ИННОВАЦИОННОЙ ДЕЯТЕЛЬНОСТИ В РЕСПУБЛИКЕ КАЗАХСТАН

Рассмотрены теоретические и практические вопросы разработки финансового механизма активизации инновационной деятельности в Республике Казахстан. Определены актуальные условия и предпосылки развития существующего финансового механизма инновационной деятельности. Предложено использовать многоуровневую систему финансирования науки и инноваций в Казахстане, на основе активного привлечения частных и внебюджетных финансовых ресурсов.

Ключевые слова: финансовый механизм развития инноваций, наука и инновации в Казахстане, многоуровневая система финансирования инноваций.
Statement of the problem. International and domestic experience of companies work in a competitive market conditions has shown that the most effective measure for overcoming the crisis and for improvement the efficiency of the work is to unite the efforts of Kazakhstan enterprises through diversification of capital and education on this basis various diversified corporate structures. Current situation in the economy of Kazakhstan is characterized by a dynamic transformation of the structure of business entities both at the state level and in the enterprise corporation sector in finding the most effective organizational forms of diversification of industrial and financial capital. All operating businesses in various industries, developing entrepreneurial business, cleverly seeking, forming and investing the financial resources, must aspire to an effective entrepreneurial result and minimize the risks. Formed theory of minimization of business risks forcing national companies to diversify type of activities, acquire or create non-core businesses, which generally led to the formation of diversified corporate associations, possessing a fairly large amounts of financial resources, which are designed to best meet the requirements of the rapidly growing national economy.


In the studies notes that, as the public sector develops and its concentration in its framework large and growing amounts of public resources are growing urgency of the problem of the economic efficiency of the state. The functioning of the public sector does not always lead to the achievement of the desired results. In this context, the concept failures (defects) of the State emerged, that is, the circumstances, objectively impede the achievement of effective results through the actions of the state. A number of shortcomings of the state arises from the same causes as the market failures, and in the causes of occurrence of the last significant role plays imperfection of information. State failures linked with imperfection of political process, and limited control over the voters for the state apparatus. This problem also exists in corporations where top managers are endowed with a fairly broad powers and can, in principle, to act in their own interests to the detriment of the owners,. However, the latest available indicators of quality of management related to income, sales, etc., and changes their values are closely monitored by the owners of large blocks of shares, in which there are incentives and the possibility of intervention.

Selection earlier of the unsolved aspects of the common problem. Today, more than half of Kazakhstan’s GDP is produced by large public and private diversified holding companies that have the legal form as a national superholdings, bank holding companies and conglomerates, joint stock companies. A multidisciplinary corporate organization of business in Kazakhstan is aimed at implementing large-scale and expensive projects by the Strategy of forced industrial-innovative development of the country, as well as the diversification of capital in the industries. And this requires concentration of required amount of financial and investment resources. It is very important problem remains many of the provisions of the financial management in enterprises, primarily in the national companies of Kazakhstan. 

Finance management system of national companies and their businesses, primarily rests on the ability of managers at various levels to take optimally effective management decisions. To do this, priority must be given not only to the restructuring of the national economy, the development of production on a new technological base, enhance innovation activity, and the questions of efficient use of available financial resources. Should be created appropriate conditions for provision a steady stream of effective innovations and their financial security. Despite the development of the foundations of financial management in enterprises of Kazakhstan in a short past period of market economy, we can not yet fully approve about the general methodological issues for improvement the finance management system of the Kazakhstan National Companies.

The purpose of the study is to propose recommendations for improvement finance management system in public enterprises of Kazakhstan with the current priorities of development of national economy.

The main results of the study. For Kazakhstan, the direction of state business predetermined by objectives of creation the most favorable conditions of the functioning of the market economy and the provision of an optimal structure of the national economy, meeting the requirements of sustainable development. Preferred areas for state business are: energy and transport, as a capital-intensive, with large investments, all new industries (nuclear power plants, chemical plants), the social and industrial infrastructure, the military-industrial complex.

It is quite logical arguments that no matter how imperfect it may have been the actions taken by the state, and however limited it may have been its capabilities, since the need for government involvement in the economy is not in doubt, the question naturally arises about suitable use the
resources that it has. It is noted that in this respect the important role played by the analysis of costs and benefits, that is tools of formalized assessment of rationality of public programs and projects. Clear formalized procedure of comparing costs and benefits can serve as an alternative, on the one hand, voluntarism in decision-making, and on the other – planning for future expenses of achieved level (Figure 1). First, in the long run, the development of the public sector dominates the interests of the bureaucracy, the second turns the inertia and loss of connection with the real needs of society. First, eventually dominates the development of the public sector to interests of the bureaucracy, the second turns the inertia and loss of connection with the real needs of society.

<table>
<thead>
<tr>
<th>Management of costs</th>
<th>Management by the results</th>
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<tr>
<td>➢ Balance of budget</td>
<td>➢ Medium-term financial planning</td>
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<tr>
<td>➢ Monetary performance</td>
<td>➢ Reorganization of budget institution</td>
</tr>
<tr>
<td>➢ Treasury</td>
<td>➢ New forms of budgetary financing</td>
</tr>
<tr>
<td>➢ Target use of funds in accordance with the plan</td>
<td>(purchase of services)</td>
</tr>
<tr>
<td>➢ Methods of distribution of financial aid</td>
<td>➢ Budgeting by objectives and results</td>
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<td></td>
<td>➢ Accounting and reporting by the international standards</td>
</tr>
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</table>

Figure 1. The logic of development of public finance management

In conditions of to the deepening of market reforms in Kazakhstan strategic and tactical goals of management of enterprises finance of various industries must be supplied to meet the requirements of modern financial management. As you know, the main purpose of financial management – is to build an effective system of management of finance, to achieved the set goals and outcomes of the activity. And today, it is obvious that the organization of finance management in specific enterprises depends on complex factors: the forms of ownership and legal status, industry and technological features, size of the enterprise, forms of financial security, efficient management system.

As you know, financial management – the art of managing of the finance of enterprises and corporations, ie monetary relations connected with the formation and use of their capital, earnings and cash flows. It can be said that financial management is mastered in the domestic business practice, involves the use of a wide range of methods inherent in a market economy (diagnosis of the financial condition, investment analysis, budgeting of income and expenses, etc.).

At the same time, the domestic financial management (unlike to Western) develops in the conditions of still unstable economy, which is characterized by instability, relatively high inflation, non-payments crisis, a large tax burden on producers, as well as the significant business risks, that allowing us to display it in the system of economic model of the functioning and management of the National companies, where, in one form or another state is involved. With rapid changes in the external and internal conditions of economic management current management solutions, which previously ensured the financial success of the enterprise, today may lead to the opposite result. Therefore the art of finance management of enterprise requires a timely adjustment of its financial strategy and tactics, the search for new methodological approaches of verification of management decisions (methods of depreciation of fixed assets and intangible assets, revaluation of fixed assets, capital financing, etc.). [9]. It is recognized that the objects of financial management are: the structure of the monetary capital, investment in fixed assets, investments in working capital, costs, profit (margin), cash flow (liquidity).

It should be said about the main tasks of the financial management of National companies, which are as follows:

- the formation of financial resources in the amount sufficient for achievement of implementation of the objectives of the enterprise;
- ensuring the effective use of amount of financial resources, generated by the key areas of the business entity activity;
- optimization of cash flows in the current, investing and financing activities;
- to minimization of the level of financial risk in the envisaged amount of profit;
- ensuring financial stability and solvency of the company in the process of its development.

In addition to this, the system of financial management of the National Company has its own characteristics in terms of the advantages and limitations, unlike from the system of finance management in private corporations (Figure 2).
Learning and using these features will allow better effectively manage the process of recruitment and utilization of financial resources of the National Company, to optimize the financial and cash flow and the relationship with the principal owner – the state, strengthen the financial and investment activities – as a factor of providing sustainable development of the company. As can be seen from the scheme, the advantages and limitations of the system of financial management of the National holdings, as a factor of financial and economic holding efficiency.

The functioning of the main part of the National holdings is inefficient sectors of the economy, which limits their financial stability; System of incentives of effective solutions of financial managers is inadequate compared to private corporations, where is widely used mechanism bonus by shares etc.

In accordance with the current state economic policy the main task of the state in relation to national companies – to bring domestic national companies operating in key sectors of the economy with the organization of professional management and advanced technology, to world markets.

At the current stage of the state policy in the field of state property management aims to increase of the incomes of the republican and local budgets at the expense of non-tax revenue from the use of state property, the improvement of the financial and economic indicators of public enterprises and entities with state participation in the share capital, the implementation of the privatization of state assets, depending on the interests of the state in relation to specific sectors and specific companies.

For the successful implementation of the state policy in the field of management of state assets it is necessary: - involve state-owned assets in the country's capital turnover and increase the efficiency of their management [10]; further develop the sector of national companies and state-owned enterprises with the direct participation of the state; consider the possibility of creating of the inspecting agency with the aim conduct audits and to identify the true financial condition of the national companies and state-owned enterprises [11];

inject mobility to public capital and direct it primarily to address public goals rather than for own needs of national companies and state-owned enterprises;

an inventory, assessment and prepare an inventory of items, which are necessary to transfer to municipal ownership.

Connected capital strength and power of the government create conditions for effective development of corporations and the protection of national and group economic security. And it is logical that the government is supporting large corporations in crisis, force-majeure circumstances for them at the expense of the state budget. Search for an optimum between social and corporate-economic development of the state – the most important imperative, which should be developed by each state, taking into account international experience and the ongoing socio-economic policy. State Strategy of socio-economic development and corporate strategy have forward and backward linkages. In this case, the priority of the state strategy is not attached. Optimizing the development of the national economy, corporations and state economic system should be guided by the highest state order: through thriving economy achievement a wealthy state with the highest standards of life the population.

From the standpoint of the prospects of socio-economic development, development of society working of long-term national strategy needed in strengthening the corporatization should be calculated the social and economic efficiency that justify the radical changes of the economic system of society, the mechanisms of its transformation.

Corporate sector in these conditions interact with the public sector of the economy, particularly in the areas of providing of national security, development of strategic industries, the solution of important and large-scale social and infrastructure problems. In this regard, in practice a number of developing countries are state-corporate business practices in ways not effective for capital, but necessary for the state and society. In this regard, as practice of number of developing countries shows state-corporate forms of activities are created in ways insufficiently effective for capital, but necessary for the state and society. One of the fundamental objectives of the government is to providing the balance of the interests of all legal entities of economic activity. Establishment of a national corporate system in Kazakhstan is put forward in priority of economic policy and objectives of strategic importance.

In the world of science and social practice there was such a thing as economic sovereignty, which naturally includes national corporations of strategic importance, especially carefully guarded by the state from bankruptcy, artificial disintegration or absorption by foreign competitors. So, at the end of September 2005, President of France Jacques Chirac spoke publicly expressing against the idea of separation and sale of largest French corporations by foreign investors, "Slash and instability of the capital of some large French corporations is a risk factor for industrial power and unemployment". After him, the prime minister of France spoke about the need of development a special program of economic patriotism. And two decades earlier.
president of the same country Francois Mitterrand insisted on the nationalization of several large companies, under which threatened a foreign takeover. After carrying out the necessary reorganization and refocusing on priority areas of activity they have been returned to the bosom of the national market economy. Is it always, even large corporations, for whatever reasons, can fund in the necessary amounts in capital-intensive projects in their segments? If not always, then the condition for the effective growth of appropriate sector of the economy may or direct replacement of this function of the corporation by the state (to the extent and as long as this is necessary), or targeted funding by state investments programs, implemented by corporations. A similar strategy was typical and widely used by the majority of the newly industrialized countries. As part of this strategy, China is actively developing. More than half of the total investment in China has on the public sector, and especially it finance all large and capital-intensive projects (in energy, space industry, aviation, electronics, etc.).

At the current stage of construction of the corporate system without an active, consistent and proactive participation of the state can not do. The rate of displacement of projects (in energy, space industry, aviation, electronics, etc.) and especially it finance all large and capital-intensive projects (in energy, space industry, aviation, electronics, etc.).

Among the major national companies are allocated NC "KazMunaiGas" NC "Kazakhstanemirizhol" NC "Kazakhstanecom", "KazakhstanInzhiniring", "KEGOC" and NAC "Kazatomprom". These companies was part of a group holding "Samruk", and in 2007 and 2010. total revenue share holding in Kazakhstan’s GDP amounted to an average of 18%. Revenues for the four largest companies in the holding – "KazMunaiGas", "Kazakhstanecom", "Kazpoche", "KEGOC" amounted to 2.2 trillion. KZT or 128.6 billion dollars.

These qualitatively new processes in the corporatization of the economy, primarily associated with the implementation of the program "30 corporate leaders", which aims to help in raising capital, the introduction of advanced forms and methods of corporate governance in line with international standards, which should be the result of competitive innovation economy. Today it is very important to create all conditions for the operation of large enterprises, only they are able to bring products of domestic production to world markets. In financing of breakthrough projects the state’s share on the first phase will not exceed 25%, business (corporate), respectively – 75%. 30 corporate leaders, implementing adequate national projects focused primarily on technological breakthrough and overcome the raw nature of the economy of Kazakhstan.

The program "30 corporate leaders" aims to support large projects, the so-called "engines of the new economy" (worth over $ 100 million), and beginning from 2008 and further manifest objective strengthening the positions of the state in the economy, governance and participation in business. The state participates in strategic important industries and fields, providing a technological breakthrough and innovative level of the economy, where it intends to work closely with the private sector. Namely on the level of "30 Corporate Leaders" it allows private businesses to prove themselves in a national scale, to attract investments, including foreign ones, for introduction of innovations and modern technologies. In turn, "the Fund of National Welfare "Samruk-Kazyna" intends to propose an optimum package of state support "breakthrough projects", that during implementation of the latest present the most complexity and challenge, because due to the government guarantees of reality and ensure the competitiveness of the projects. Through the program "30 corporate leaders" will be supported by large scale business projects that will provide a multiplier effect throughout the entire not primary sector of the economy. This is both the development of related industries, and improving of the business environment for all enterprises in the country.

Strengthening of the state’s presence in strategic (primary) sectors of developing and transition countries appears worldwide trend beginning of the XXI century. Development of the state of entrepreneurship in this attractive and promising segment of the economy provides a real budget revenues and control over important strategic area. Legal basis of concentration of capital national companies is strengthened. Thus, for leading corporations are typical processes of concentration and centralization of capital, assets, shares, expansion of international relations, especially exchange through IPO.

The findings of this study and the prospects for future developments in this area. In general, the further improvement of the system of finance management of National companies must be realized in the following priority areas, which can be grouped by five main areas:

Further modernization of the public sector of economy, based on the improvement and development of the regulatory framework;
- Development of system of public-private partnerships, including the activation of the financial and investment projects;
- The full implementation of the principles and elements of corporate governance;
- Improving the financial mechanism of the functioning of the National companies;
- The full introduction of a modern system of financial control based on the audit of efficiency.

References
An influence of international labor migration on national competitiveness

The governmental regulation of labor force migration is an important part of country's image. The interdependence between international labor force migration and national economy's competitiveness is analyzed. The Global Competitiveness Index was chosen as a background of the research. The ways of improving of Ukrainian performance in a Global Competitiveness Index are described. The necessity of governmental programs, supporting national entrepreneurs must be emphasized.

According to all the facts about an economical background of the international labor migration, in it's organizational, economical and juridical regulation, in it's substantiation and practice, the main micro and macro economical figures, derived from the world index of competitiveness are shown. These figures can be considered as an expression of the Ukraine competitiveness level. Some experts like H. Drzeniek [13], M. Porter [14], X. Sala-i-Martin [15], A. Zhalilo [16] should be emphasized.

There are also works by local and foreign scientists, dedicated to the problems of international competitiveness of Ukraine. Ukraine is getting more and more involved in these processes. Ukraine is getting more and more involved in these processes, because the need to attract foreign specialists is increasing. The stimulation of the high-qualified specialists' immigration is also a way of gaining a competitive advantage. The necessity of governmental programs, supporting national entrepreneurs must be emphasized.

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ernments cooperate to gain a profit and to stimulate an economical increase. Institutional base is very important for making the decisions on investment and an organization of production. Its successful functioning is not possible without minimization of bureaucracy by local authorities and maximization of private sector's transparency.

So, developed institutes stimulate an increase in the amount of foreign migrants inside a country. Such situation leads to a number pluses and minuses for the national economy. The immigration of high-skilled specialists stimulates a development of the modern technologies in a country. On other hand, an inflow of the less educated and skilled workers, that are trying to find job offers with better options, than in their country of origin, only cuts costs on salaries for companies. It strengthens their competitive position in the short time period, but results in an increase of unemployment inside a country.

Conditions of institutes also influence an amount of remittances from citizens working abroad. The security of governmental debt size are influencing competitiveness of economic figures, an inflation rate, a budget deficit and a country's unemployment rate. Sometimes investing plans even have an influence on a decision which country to choose for immigration. While staying and working abroad, person tries to discover the peculiarities of local financial and capital market, to gain some experience in doing business.

In a case of Ukraine, 'The quality of institutes' figure is comparatively very low. The level of Ukrainian institutional framework development is on 132nd place among 140 countries (Table 1), according to the GCI research [17]. As a conclusion, it must be mentioned, that such situation stimulates emigration, a 'brain drain' and poor foreign investment in Ukraine. An amount of remittances transferred to Ukraine is also rather low.

It can be explained by the fact, that most Ukrainian immigrants are from the countries, where infrastructure level is even poorer. An international competitiveness of these countries is also much lower. Such immigrants aren't high-skilled; they present a cheap labor force segment. This situation influences competitiveness of national economy badly. Development of the governmental regulation of labor force migration can help to improve Ukraine's position. The implementation of raising budget deficit, government will try to make options of bank crediting tougher. Governmental debt also influences competitiveness of national economy. Large governmental debt makes social payments impossible. It causes a decrease in national welfare.

The labor force outflow figure is reversely proportional to all three macroeconomic indices mentioned earlier. Healthy macroeconomic environment prevents the 'brain drain', but stimulates an increase in the international migrants' inflow. Ukraine has a 65th place among all the countries presented in the research [17]. This is not a very high result, but a migrant's inflow to Ukraine is still rising (Table 2).

Table 1. The Global competitiveness Index rankings of Ukraine, 2008 – 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ukraine's rank in The Global Competitiveness Index</td>
<td>73</td>
<td>72</td>
<td>82</td>
<td>89</td>
<td>82</td>
<td>73</td>
</tr>
<tr>
<td>Institutions</td>
<td>115</td>
<td>115</td>
<td>120</td>
<td>134</td>
<td>131</td>
<td>132</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>77</td>
<td>79</td>
<td>78</td>
<td>68</td>
<td>71</td>
<td>65</td>
</tr>
<tr>
<td>Macroeconomic environment</td>
<td>82</td>
<td>91</td>
<td>106</td>
<td>132</td>
<td>112</td>
<td>90</td>
</tr>
<tr>
<td>Health and primary education</td>
<td>74</td>
<td>60</td>
<td>68</td>
<td>67</td>
<td>74</td>
<td>62</td>
</tr>
<tr>
<td>Higher education and training</td>
<td>53</td>
<td>43</td>
<td>46</td>
<td>46</td>
<td>51</td>
<td>47</td>
</tr>
<tr>
<td>Goods market efficiency</td>
<td>101</td>
<td>103</td>
<td>109</td>
<td>129</td>
<td>129</td>
<td>117</td>
</tr>
<tr>
<td>Labor market</td>
<td>65</td>
<td>54</td>
<td>49</td>
<td>54</td>
<td>61</td>
<td>62</td>
</tr>
<tr>
<td>Financial market sophistication</td>
<td>85</td>
<td>85</td>
<td>106</td>
<td>119</td>
<td>116</td>
<td>114</td>
</tr>
<tr>
<td>Technological readiness</td>
<td>93</td>
<td>65</td>
<td>80</td>
<td>83</td>
<td>82</td>
<td>81</td>
</tr>
<tr>
<td>Market size</td>
<td>26</td>
<td>31</td>
<td>29</td>
<td>38</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>Business sophistication</td>
<td>81</td>
<td>80</td>
<td>91</td>
<td>100</td>
<td>103</td>
<td>91</td>
</tr>
<tr>
<td>Innovation</td>
<td>65</td>
<td>52</td>
<td>62</td>
<td>63</td>
<td>74</td>
<td>71</td>
</tr>
</tbody>
</table>

Source: http://www3.weforum.org/docs

Infrastructure. Infrastructure includes such components as transport, communications and informational streams. An effective infrastructure guarantees a successful functioning of markets, an easy coverage of distance between regions, convenient production process. That is why infrastructure level is a very important part of the national economy's competitiveness.

A quality of infrastructure influences internal labor force migration in a country. In a case of well developed transport system and communications a movement of workers from one region to another intensifies. This process results in a decrease in the regional unemployment figures. On other hand, bad conditions of markets, shortage of information and ineffective transport connection can cause difficulties in making business, decrease of the main economical figures and emigration.

In a current component of national competitiveness Ukraine has a 65th place among all the countries presented in the research [17]. This is not a very high result, but a migrant's inflow to Ukraine is still rising (Table 2).

Table 2. International labor migrants inflow to Ukraine

<table>
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</thead>
<tbody>
<tr>
<td>International labor migrants inflow to Ukraine, thousands of people</td>
<td>46,5</td>
<td>37,2</td>
<td>32,9</td>
<td>30,8</td>
<td>31,684</td>
<td>76,361</td>
<td>29,908</td>
</tr>
</tbody>
</table>

tougher regulation of immigration will allow preventing the inflow of unqualified labor force and their families. It can result in an increase of social payments and a decrease of budget deficit. Moreover such a step will artificially cut the competition on a local labor market. As a result, an unemployment rate inside a country will decrease.

**Health and primary education.** Professional skills and health conditions of the labor force is an important basis of successful business. Furthermore competitiveness of economy is hypothecated in primary school and healthcare systems effectiveness. This pillar's results are strongly tied with early mentioned macroeconomic environment figures. The costs on education and healthcare must be correctly estimated in a budgetary process. In a case of the large budget deficit, the usefulness of these spheres of activity will not be maximized.

The way to improve results in that pillar of competitiveness of national economy is to implement a labor migrant's certificate. The first paragraph of that document should include full individual data of the international labor migrant. The migrant's age, his sex, marital status, the presence of chronic diseases and mental health condition must be specified there. This information should help to make a conclusion about a migrant's ability to work and to reduce the risk of further social payments on the ability to work loss.

The implementation of the labor migrant's certificate is now very actual for Ukraine. Our country has a 62th place in that pillar among all presented in the GCI research countries [17]. According to such result, the most part of foreign labor immigrants are coming to Ukraine from less developed countries. The labor migrant's certificate will help to reduce a number of these immigrants and to increase a national competitiveness furthermore.

**Higher education and training.** This pillar of competitiveness of national economy is derivative from the previous one. Higher educational and professional level of the labor force will lead to modernization and implementation of new technologies in production process.

Country's competitiveness in that pillar correlates with macroeconomic stability, infrastructure level and social standards. If the mentioned figures are low, an amount of labor emigrants in a country will raise. In a case of high-skilled specialist, this process is called 'brain drain'.

Stimulation of foreign specialists' immigration is also very important. Especially for Ukraine with its 47th place in that pillar among all presented in the GCI research countries [17]. For that country, obtaining additional labor migrants a simplified procedure of entering the country should be provided. An early mentioned labor migrant's certificate can help in that case too [9]. Its second paragraph must include information about obtained high education and professional skills. The analysis of this data will simplify the process of giving the work permits to immigrants.

**Goods market efficiency.** Remittances, which country achieve from their labor emigrants, are among the main advantages of international labor force migration. They procure a foreign currency inflow and allow compensating losses, caused by workers outflow. Money transfers from abroad also increase country's welfare and, as a result, its competitiveness. According to International Organization for Migration's report, the global amount of remittances from international migrants in 2009 was 414 billions of dollars; the remittances inflow to Ukraine in the same period was 4, 5 billions of dollars [18].

The efficiency of goods and services market creates comfortable background for foreign investment inflow. Absence of redundant governmental control and high taxes makes an appropriate environment for doing business. These two figures have a direct influence on the amount of money transfers, sent by international labor migrants.

Ukrainian goods market's efficiency rate is 117th among all the countries in GCI research [17]. The market system in Ukraine needs thoroughgoing changes immediately. The investment-climate improvement is especially necessary. That step will help to increase competitiveness of the national economy and to stimulate the remittances' inflow.

**Labor market efficiency.** The key indicator of the labor market's efficiency is an unemployment rate. It is tied with migration processes in a country and strongly influences country's competitiveness.

International migration of the unqualified workers causes an increase of unemployment in receiving country. This increase leads to intensification of emigration. Main reasons of emigration are job losses and dissatisfaction with conditions of work. In most cases international labor migrants ask for lower wages then local workers. Entrepreneurs cut their operating costs employing foreigners. As a result, locals have problems with getting job.

There is a necessity of development of governmental regulation of the labor force migration in Ukraine. This statement is proved by the 62th place in that pillar of GCI research [17].

This pillar is mostly influenced by international migrants' inflow. The correlation coefficient between “Labor market efficiency” and “International migrants' inflow” is 0,54.

Growing number of people emigrating from Ukraine to Russia, countries of European Union (especially to Poland, Portugal and Italy), USA and Canada (emigration to these two countries is, mostly, a ‘brain drain’) can also be seen as proof of labor market's poor conditions.

**Financial market development.** Analyzing the financial market development's influence on competitiveness of national economy, an existence of risks for foreign investors should be studied. The main aim of Ukrainian financial market's regulation is to increase trust to local business among international investors.

**Technological readiness.** The level of development of informational and communicational technologies determines competitiveness rate of local businesses. It is evident, that upgrading of technologies is impossible without sizable investment. Additional finance will allow to buy foreign equipment or to employ highly-paid professionals. Such specialists can help to skimp costs on equipment developing existing capacities. International labor force migration has a direct influence on this figure.

It was mentioned, that main aim of governmental regulation is a high-skilled workers inflow stimulation. But, on other hand, improvement of working conditions for local specialists is also very important. It allows to prevent the ‘brain drain’.

**Market size.** Market size determines facilities of national enterprises on international markets. Large-sized market gives enterprises possibility to achieve additional advantages via calibre economy.

Business enlargement and sales increase allows creating new jobs. In that case workers' outflow will decrease nor as high-skilled specialists loss probability.

Ukraine has a 38th result in that pillar [17]. The capacity of Ukrainian market is comparatively large. But local enterprises often lose competition to foreign companies. They face bankruptcy and increase the unemployment rate, instead of new job creating.

Governmental grant-in-aid to enterprises, which employ local workers, instead of less-paid foreigners, is a way to solve this problem. According to that approach, company gains additional competitive advantage, creates new jobs for locals and the international labor migrant's inflow decreases.

**Business sophistication.** Competitiveness of local enterprises is one of the most important factors of national economy's competitiveness forming. Successful activity of enterprises makes functioning of branches of industry more
effective. The global of country's development is based on international competitiveness of enterprises.

International labor force migration is toughly tied with competitiveness of business. The quality of international migrants’ outflow and inflow determines human capital, which company owns doing business.

91st place of Ukraine in that pillar of GCI emphasizes the necessity of corrections in governmental regulation of the labor force migration[17].

Innovation. This last pillar of GCI mustn’t be additionally explained. Its influence on competitiveness of national economy is evident. Innovations play a key role in international competitiveness of enterprises, their attractiveness for investors and technological level.

The development of science and education system and clever governmental regulation supports innovative segment of economy’s international competitiveness. Special attention should be paid to the attraction of high-skilled specialists from abroad and to self-development programs for young scientists.

Conclusions. Competitiveness of national economy and international labor force migration are strongly tied. It is confirmed by the analysis of the 12 pillars of competitiveness. As a background of the research, the GCI method was used.

The results of the research show, that governmental regulation of labor force migration influences even the national markets’ capacity. Governmental control and limitation of international migrants’ inflow and outflow allows reducing of an unemployment rate and increasing of competitiveness of the local enterprises.

The stimulation of high-skilled foreign specialists’ inflow is also a very important factor in a forming of the national competitiveness. They bring new technologies and the results of their work will help to increase main macroeconomic figures.

Among the main goals of governmental policy on international migration the support of local scientists and IT-specialists should be emphasized. The emigration of those persons is called ‘brain drain’ and is one of the factors decreasing competitiveness of national economy.

Governmental attention should be also paid to the programs supporting local enterprises. The enterprises, which employ local workers, instead of less-paid foreigners, should gain governmental grant-in-aid. Such step will help to create new jobs and to fight unemployment in a country.

Proposed actions should help to increase international competitiveness of national economy and to improve country’s international image.

References

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The theoretical, methodological and practical aspects of changes in financial reporting and source documents specific to Ukrainian enterprises in the new conditions resulting from the application of International Financial Reporting Standards have been analyzed. Also, a conceptual approach of defining the patterns of changes in financial reporting and elements of accounting method has been proposed. The issue of internal quality control of analytical accounting information at various stages of its formation has been researched.

Keywords: financial reporting, source documents, inventory-taking, accounting and analytical information, International Financial Reporting Standards.

Introduction
The Ukraine's joining the global processes of formation and development of globalized business requires the development of appropriate mechanisms to ensure its economic, social, organizational, informational, human, educational, environmental and other needs. The formation of qualitatively new financial reporting of Ukrainian enterprises as a result of implementation of international standards is a complex process of reforming the provision of analytical accounting information to functioning business on the basis of renewal of its limited resources. International experience shows that the practice of forming and disclosing of analytical accounting information and appropriate organization of accounting process has already been regulated by specific methods based on macroeconomic concepts that have general scientific nature. The main provisions of these financial reporting conceptions are deeply intertwined with the emerging conceptions of corporate governance, creating conditions for further development of the accounting and financial reporting theory. The formation of such specific areas as the theory of financial reporting, the history of financial reporting, financial reporting quality control systems in the international scientific community of financial and accounting sciences can serve as an example.

The research of the formation and disclosure of analytical accounting information regarding the basic elements of financial reporting of Ukrainian enterprises does not go beyond the accounting and its theory. The consideration of the subject and the accounting method as well as its specific elements by Ukrainian scientists is still not sufficiently connected with macroeconomic concepts of development of transnational and national systems of financial reporting and local accounting information systems. The processes of standardization and harmonization of financial reporting are studied within the accounting system [1] and the methodological aspects of financial reporting – within the accounting theory [2, 3]. Meanwhile, gradually a change takes place in the understanding of the nature and importance of financial reporting and source documents, as well as a search for new ways of reforming the national accounting and financial reporting system in accordance with international standards at both the methodology level, and the level of organization.

The main emphasis of this study is placed on the analysis of special features of financial reporting, source documents and internal quality control system of analytical accounting information, including the inventory as one of its most important elements, that are characteristic of reproduction and analytical accounting information systems at micro and macro levels.

The aim of the article is to develop the theoretical principles of quality assurance of analytical accounting information of Ukrainian enterprises at various stages of its formation: within the source documents system, within the financial reporting system, within the system of internal controls and strengthening of disclosure of analytical accounting information contained in source documents and financial statements at micro and macro levels (transnational, international, national and local) in the context of implementation of international standards.

1 Methodological problems of the intended surveys
Since the nineties of the last century the national practice of providing analytical accounting information support for business has been guided by the following initial methodological principles [4]. Firstly, it is a combination of macroeconomic concepts underlying the formation of the information in financial reporting: the concepts of capital in the financial and physical form, the concepts of preserving the capital and forming financial results; a concept of probability of occurrence of economic benefits and related risks to the enterprise; and a concept of assessing the value of basic elements of financial reporting, etc. It should also be noted that in implementing the IFRS a necessity arises to develop new concepts of formation and disclosure of financial information in financial reporting by transnational globalized business management institutions. Thus, the vertical framework of information support for functioning business gets complicated due to disclosure and use of the information contained in financial reporting: transnational macroeconomic concepts (and corresponding groups of interests and needs) – international macroeconomic concepts (and also corresponding groups of interests and needs) – national macroeconomic concepts (and also corresponding groups of interests and needs). The experience of implementing the IFRS in different countries shows that, firstly, the changes are possible in priorities of interests and needs and respective changes in the vertical of their subordination. Secondly, it is necessary to adhere to the general principles of organizing the processes of formation and disclosure of analytical accounting information (accruals, continuity and subordination to the existing local accounting system of the enterprise). Thirdly, there are common features of analytical accounting and financial information regarding the basic elements of financial reporting, such as historicity, qualitative and quantitative limitations. The listed methodological principles are applied to develop specific methods of forming the information in financial reporting of enterprises in order to achieve such basic qualitative characteristics as being understandable for users, appropriate-ness (essentiality), trustworthiness (true representation, prevalence of essence over the form, neutrality, circumvention) and comparability.

Clear organization of the process of forming the analytical accounting information at the stages of identification, measuring, recording, gathering and generalization [5] is ensured by adherence to the principle of subordination
(interdependence). Applying this principle makes it possible to take into account the limits and the structure of specific local accounting systems, which directly affects the scope and quality of the information itself.

Macroeconomic concepts of formation and disclosure of information gradually became a meaningful component of modern methods of accounting process at the enterprise, its organization and management, under the influence of the processes of standardization of accounting and financial reporting systems. The consistency of financial reporting preparation processes under international standards and the functioning of local accounting systems at the enterprise have already been recognized to be appropriate: they should be organized according to the principles and rules of international standards. The transformation of financial reporting of Ukrainian enterprises into financial statements prepared in accordance with international standards, as practice showed at the beginning of the XXI century, was effective just for a short time, it was complicated, it required significant costs, and its perspective was questioned. Therefore, the transformation did not prove to be a mass versatile tool for forming financial information under international standards. Undoubtedly, the IFRS introduction is a combination of extremely complex processes that occur in business, government regulation, personnel training, activity of professional organizations, as well as in economic science. Hence, further development of improved forms of financial reporting requires scientific tools that would be based on the methodological principles of both the accounting theory and the theory of financial reporting.

Providing analytical accounting information support to the functioning and reproduction of business activity belongs to factors that promote the inflow of foreign investments into the country's economy. The data in Table 1 show a gradual growth in foreign direct investments in Ukraine's economy during 2002-2012. Even the global financial crisis of 2008-2009 did not cause a decrease in their volumes.

Table 1. Direct foreign investments in the Ukraine's economy over a period from 2002 to 2012

<table>
<thead>
<tr>
<th>Ser No.</th>
<th>Year</th>
<th>Amounts (mln USD)</th>
<th>Absolute Growth of Investment Volumes (mln USD)</th>
<th>Relative Growth of Investment Volumes (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2002</td>
<td>5339.00</td>
<td>789.10</td>
<td>14.78</td>
</tr>
<tr>
<td>2</td>
<td>2003</td>
<td>6128.10</td>
<td>1468.60</td>
<td>23.97</td>
</tr>
<tr>
<td>3</td>
<td>2004</td>
<td>7596.70</td>
<td>3344.90</td>
<td>44.03</td>
</tr>
<tr>
<td>4</td>
<td>2005</td>
<td>10941.60</td>
<td>8278.70</td>
<td>75.66</td>
</tr>
<tr>
<td>5</td>
<td>2006</td>
<td>19220.30</td>
<td>6517.60</td>
<td>33.91</td>
</tr>
<tr>
<td>6</td>
<td>2007</td>
<td>25737.90</td>
<td>9935.00</td>
<td>38.60</td>
</tr>
<tr>
<td>7</td>
<td>2008</td>
<td>35672.90</td>
<td>2604.80</td>
<td>7.30</td>
</tr>
<tr>
<td>8</td>
<td>2009</td>
<td>38277.70</td>
<td>3629.70</td>
<td>9.48</td>
</tr>
<tr>
<td>9</td>
<td>2010</td>
<td>41994.40</td>
<td>5751.70</td>
<td>13.73</td>
</tr>
<tr>
<td>10</td>
<td>2011</td>
<td>47659.10</td>
<td>4305.60</td>
<td>9.03</td>
</tr>
</tbody>
</table>

Source: Bloomberg Terminal – Access mode:knu.bloomberg@gmail.com [6]

According to Table 1, the largest absolute growth of investments took place in 2008, which in relative indexes corresponded to 38.6%. The growth of foreign investments continued in the crisis year of 2009 (7.3%) and in the aftermath of the global economic crisis – respectively by 9.48%, 13.73% and 9.03%. Comparing the dynamics of foreign investments in 2002-2012 with the process of reforming the national system of accounting and financial reporting in Ukraine, we can state that during these years positive evolutionary changes in accounting and analytical accounting information environment of functioning businesses also took place. The state regulation of processes aimed at improving the national system of accounting and financial reporting in accordance with international requirements, and at ensuring the quality and continuous coverage of investors' needs has acquired a strategic nature. Such measures include, for example, the adoption in late October 2007 of the Strategy of Application of International Financial Reporting Standards (IFRS) in Ukraine, the purpose of which was to promote improvements in the investment climate in Ukraine [7], and further extension of its use up to 2012 [8], as potential investors had to apply great efforts to disclose analytical accounting information contained in the financial statements of Ukrainian enterprises compiled according to the national standards.

For comparison, an example of the Russian Federation can be cited, which also belongs to the countries that allow the IFRS application. Meanwhile, significant attention to the issue of accelerating the IFRS introduction in the country has been paid only in recent years. The data in Table 2 indicate that, despite the volumes, increasing foreign investments in the country is not observed.

Table 2. Direct Foreign Investments in the economy of the Russian Federation over a period from 2000 to 2011

<table>
<thead>
<tr>
<th>SerNo</th>
<th>Year</th>
<th>Amounts (mln USD)</th>
<th>Absolute Changes of Investment Volumes (mln USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2000</td>
<td>2714.20</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>2001</td>
<td>2748.30</td>
<td>34.10</td>
</tr>
<tr>
<td>3</td>
<td>2002</td>
<td>3461.10</td>
<td>712.80</td>
</tr>
<tr>
<td>4</td>
<td>2003</td>
<td>7956.10</td>
<td>4487.00</td>
</tr>
<tr>
<td>5</td>
<td>2004</td>
<td>15444.40</td>
<td>7486.30</td>
</tr>
<tr>
<td>6</td>
<td>2005</td>
<td>12885.80</td>
<td>2558.60</td>
</tr>
<tr>
<td>7</td>
<td>2006</td>
<td>29701.40</td>
<td>16815.60</td>
</tr>
<tr>
<td>8</td>
<td>2007</td>
<td>55073.20</td>
<td>25371.80</td>
</tr>
<tr>
<td>9</td>
<td>2008</td>
<td>75002.40</td>
<td>19929.20</td>
</tr>
<tr>
<td>10</td>
<td>2009</td>
<td>36499.60</td>
<td>-28502.80</td>
</tr>
<tr>
<td>11</td>
<td>2010</td>
<td>43287.70</td>
<td>6788.10</td>
</tr>
<tr>
<td>12</td>
<td>2011</td>
<td>52878.50</td>
<td>9590.80</td>
</tr>
</tbody>
</table>

Source: Bloomberg Terminal – Access mode:knu.bloomberg@gmail.com [6]
Thus, further search for new ways of conformity of the national accounting and financial reporting system with the requirements of international standards both from the perspective of theory and from the perspective of practical organization remains topical for many countries, including Ukraine.

2 Regularity of changes in financial reporting of Ukrainian enterprises

2.1 Ensuring a balance between information needs of the Ukrainian economy strategic management in high quality analytical accounting information and IAS and IFRS regarding the contents of information in financial reporting, which is continuous and systematic. Achieving this balance corresponds to the evolutionary direction of reforming the national system of accounting and financial reporting in Ukraine.

In the special foreign economic literature constant scientific debates take place on further development of financial reporting and improvement of standards. The classification of factors that require specific changes in financial reporting according to certain criteria is important to define the areas of financial reporting development. Using such criteria as changes in the distribution of work or further development of socialization of labor, it is possible to identify two main areas of financial reporting development: an evolutionary and a radical one – revolutionary.

The evolutionary one is associated with changes in the distribution of social labor and gradual structural changes in the national goods, resource, and financial markets. Accordingly, a need arises for certain changes in the composition of analytical accounting information associated with new accounting objects, their groups and classes, meeting in this way the growing information needs of the national economy and public administration.

The development of socialization of labor, the emerging new organizational models of economic activity, business and capital, and the gradual seizure of dominant positions by them in a corresponding sector of the economy requires profound changes in financial reporting.

2.2 Ensuring consistency in financial reporting between the content and the amount of financial information – analytical accounting information – tax accounting information. The mechanism of achieving this consistency may be the division of the information contained in financial reporting in the accounting one (analytical accounting and tax accounting), which is variable and additional, by its nature, and financial one (permanent, basic or primary, for example, according to the concept of "the basic elements of financial reporting"). Since 2013, the forms of financial statements of Ukrainian enterprises have become considerably closer to those that meet international requirements concerning the inclusion of mandatory items in the financial statements. [9]

2.3 Providing the interconnection of the quality of analytical accounting information in financial reporting with source documents. The information does not exist in itself, its collection, registration, gathering and processing takes place within a certain system that includes the availability of three components – a source of information, the consumers of information and the broadcasting environment. The source of information is source documents, the consumers of information are external and internal users, and the transmission environment is financial reporting. In this respect, it is the accounting that provides the necessary information for the implementation of all management controls. The external regulation of the enterprises' accounting, expressed in the regulation of the procedure for documenting business transactions, accounting methods in respective areas, procedures for the reporting preparation and filing, taking inventory of assets, capital, liabilities and documents etc., aims to provide the methodological unity of the enterprises' accounting as a whole, and therefore, the comparability of accounting and reporting information at micro and macro levels.

At the macro level, the regulation of primary accounting is implemented in the form of codes (Article 44, Item 44.1 of the Tax Code of Ukraine), laws of Ukraine ("On Accounting and Financial Reporting in Ukraine", Article 9 "Source accounting documents and accounting registers", Article 10 "Taking inventory of assets and liabilities"; the Law of Ukraine "On electronic documents and electronic documents' circulation"); regulations (Regulations on the records' documentary support in the accounting, procedures, instructions, rules, etc.).

At the micro level, the regulation of the primary accounting is carried out by the enterprise itself, guided by external regulators, by creating organizational and administrative documents, personnel documents, general administration documents, development and accounting policies approval documents and documents' circulation schedules.

If the enterprise's management decides to prepare financial reporting according the IFRS, then it is necessary to start with the preparation of the order (regulations) on the new accounting policy. The accounting policy should be developed so that all the financial statements meet all the requirements of each IFRS / IAS used, and the provisions of the Standing Committee for Interpretation of Financial Reporting. The deviation from the standard's requirements is acceptable only on extremely rare occasions, when it is necessary to ensure the trustworthiness of financial reporting.

When organizing the accounting, the order on the accounting policy should:

– Indicate the department that is entrusted to carry out accounting and prepare financial statements, and describe the organizational structure of the department;

– Show the stages of document circulation and the accounting documentation processing technology, also determine which documents regulate the circulation of source documents at the enterprise, describing the procedure for creating them, checking, the procedure and terms for transferring them to the Accounting Department to reflect the transactions in the accounting and to the archive. It is imperative that a reservation is made to specify, which transactions are processed with typical forms of source documents, and which are developed independently;

– Fix the procedure and terms for taking inventory of assets and liabilities of the enterprise.

The IFRS special feature consists in that they often offer two approaches to represent the same transactions. In this case, one approach is basic, and the other – an alternative solution. The company has the right to choose a primary or alternative approach, which is determined by its accounting policy. At that, one approach is basic, and the other one is an alternative solution. The enterprise has the right to choose a basic or an alternative approach, which is determined by its accounting policy.

In most countries, a combination of procedures that make the accounting cycle is the same. These include such issues as documenting transactions, collecting and processing documents, grouping methods, sequence of entries in the registers of synthetic and analytical accounting, procedures for filling in the general ledger and reporting.

According to national accounting standards, as distinct from the IFRS, the transaction cannot be reflected in the accounting without properly executed source document. The definition of the source document in legislation is given in Fig. 1.
Source documents should be necessarily reviewed by employees who maintain accounting records, in both substance and form, i.e. checking the availability of required details in the document and compliance of the transaction with current legislation, and logical linking of individual characteristics.

Source Documents, including those on paper and electronic media, for them to become effective must have the following required details: name of the document (form); date and place of execution; name of the enterprise, on which behalf the document is made; the description and scope of the transaction, transaction unit of measurement; positions of the persons responsible for carrying out the transaction and correctness of its documentation; signature or other data enabling to identify the person who has taken part in carrying out the transaction. Depending on the nature of transaction and data processing technology, the source documents can include additional details: State Register identification code of the enterprise or institution, document number, grounds for transaction, data about the document that identifies the recipient, etc.

Along with the source documents in hard copy, electronic documents have the right to exist.

The electronic document is a document in which the information is recorded in the form of electronic data, including the required details of the document [11]. Using electronic documents in civil relations is carried out in accordance with general requirements for performing legal actions established by civil law. Today, electronic document circulation and digital signature have become widespread in the area of banking and commercial transactions of e-commerce, and business entities are able to submit their financial statements electronically. The requirements for the execution and processing of source documents (in hard copy and in electronic form) are the same for all economic entities [5].

Failure by the taxpayer to comply with the requirements established in the legislation for source documents and other documents relating to the calculation and payment of taxes and duties that are maintained electronically, and are required for their recognition by the territorial bodies of the Ministry of Revenues and Duties of Ukraine are the grounds for non-recognition of their supporting documents by such bodies [18].

The documents are made in the Ukrainian language. Along with the Ukrainian language another language can be used according to the provisions of Article 11 of the Law of Ukraine "On the Languages in the Ukrainian SSR" dated October 28, 1989, No. 8312-XI. The documents in a foreign language, which are a basis for making accounting records, should be accompanied with an authentic translation into the Ukrainian language [13].

Employees of enterprises create and submit source documents that belong to the area of responsibility according to the document circulation schedule. The circulation of documents is a movement of documents at the enterprise from the time of their creation or receipt to completion of their execution or dispatch [3, p. 90]. The document circulation schedule can be made in the form of a scheme or a list of work to be done to create, check and process documents, carried out by each division of the enterprise, as well as by each performer, showing their relationship and work completion time. It should ensure an optimal number of divisions and performers, through which a specific source document passes, to determine a minimum period of its stay at the divisions, and improve the accounting work, strengthening control functions of the accounting and increasing its level of mechanization.

2.4 Providing the interconnection of the analytical accounting information quality in financial reporting by its systematization and generalization in accounting registers. All source documentation confirming certain business transactions must be printed out, grouped according to certain features and timely reflected in the accounting registers. Accounting registers are special format media (paper, machine) in the form of information, orders, books, logs, data sheets, etc. designed for chronological, systematic or combined accumulation, grouping and summarizing of information from the source documents that have been accepted for accounting [16]. Records of business transactions in accounting registers are called accounting registration.

The interconnection and verification of the accounting documentation can be represented by the following scheme: balance sheet and financial (accounting) statements – General Ledger – consolidated accounting registers – synthetic and analytical accounting registers – consolidated documents (reports of materially-responsible persons, bank statements, source documents' logs) – source documents.

The forms of accounting registers, the order of making entries in them, processing and using necessary information are determined by the corresponding normative documents on the procedure for using them as under:

– Instruction on the forms of memorial slips of budgetary institutions and the procedure for drawing them up: Order of the State Treasury of Ukraine dated July 27, 2000, No. 68, with amendments and additions;
– Methodological recommendations on applying accounting registers: Order of the Ministry of Finance of Ukraine dated December 29, 2000, No. 356 with amendments and additions;
2.5 Ensuring storage, withdrawal and utilization of source documents and accounting registers as a necessary tool for controlling the quality of analytical accounting information in financial reporting of an enterprise. In the course of time a need may arise to verify the correctness of accounting, the legality of transactions, providing the necessary documents to tax, financial, auditing, forensic and investigation authorities to justify the evidence, etc.

According to law, source documents must be stored over a certain period of time and then destroyed or transferred to the archive. In the first place, it is foreseen by the List of standard documents that are created during the activities of the state administration and local governments, other institutions, enterprises and organizations, indicating the duration of document storage, approved by the Ministry of Justice of Ukraine dated April 12, 2012, No. 578/5 (hereinafter referred to as the "List No. 578/5"). The calculation of the duration of document storage in compliance with the List No. 578/5 is carried out from January 1st of the year following the year of completion of document circulation. According to Item 44.1 of Tax Code of Ukraine, for tax purposes taxpayers must keep records of income, expenditures and other indicators related to the definition of the object of taxation and/or tax obligations, based on source documents, accounting registers, financial statements and other documents relating to the calculation and payment of taxes and duties, which are to be maintained according to law. Failure of the taxpayer to store source documents and other accounting registers, financial and statistical statements, and other documents related to the calculation and payment of taxes and duties during the period of storage as stipulated by Article 44 of the Tax Code of Ukraine, and/or failure of the taxpayer to provide source documents or their copies to controlling authorities during the tax inspection in cases as specified in this Code, shall be punishable by a fine of 510 UAH. The same actions committed by the taxpayer, to which a penalty was used during the year for the same infringement will be punishable by a fine of 1020 UAH [10].

Completed accounting documents are stored in the archive. The archives depending on the size and nature of the material stored in them are divided into central or general, and local (current). The central archive stores files of completed fiscal years (previous years). Local archives store files of completed transactions in the current reporting period (current year). The subjects of electronic document circulation shall store electronic documents on electronic media in a form that allows checking its integrity of these media. The duration of storage of electronic documents on electronic media should not be less than the period established by law for corresponding documents in hard copies [15].

Source Documents (in hard copies and in electronic form) are formed in files in accordance with the approved file nomenclature of the enterprise. The main factors for making a file are the storage period and the subjects of information contained in the documents.

Enterprises can destroy documents, storage period of which has expired, in coordination with the state archive institutions (List No. 578/5). To select the documents to be destroyed, a special commission of experts (hereinafter referred to as "CE") is established and approved by the head of the enterprise, consisting of the heads of the document management division and archive unit of the enterprise, employees of the respective state archive institution. The Commission conducts a preliminary examination of the documents importance, selects documents for destruction, about which a corresponding Report is made (List No. 578/5). The sequence of document destruction is as follows: a commission is established to examine the importance of documents and the organization of its activities; approval of the minutes of the CE meeting; drafting the Report; approval of the report at the State Archive; physical destruction of documents (by incineration or transfer to organizations involved in the processing of secondary raw materials). Thus, the quality of analytical accounting information in financial reporting is ensured by source documents and generalization of information in the accounting registers. In order to properly reflect transactions in the accounts, an accountant from any country should solve such problems that include the following: recognition for the transaction that has taken place; valuation to determine its value; classification to determine, where the transaction should be recorded in; documentation to identify which documents to use. Thus, source documents for any economic agent are its integral part, one of the main methods in maintaining accounting and making financial reporting. With the IFRS introduction the topicality of using source documents has not been lost for Ukraine and at the state level it is clearly regulated.

2.6 Inventory-taking as a mandatory internal tool for controlling the quality of analytical accounting information in financial reporting of an enterprise. Not always source documents cover all transactions at the time of their completion (natural losses related to shrinkage, weight loss, using during the storage, transportation, distribution, natural calamities, discrepancies in actual accounting data due to errors, embezzlement, deterioration, misuse, etc.). In this regard, there appears an objective need in a method that would provide a possibility to register the listed phenomena and processes. This is achieved by taking inventory that provides the quality of analytical accounting information in financial reporting. In accordance with Article 10 of the Law of Ukraine "On Accounting and Financial Reporting in Ukraine," in order to ensure the trustworthiness of the accounting data and financial statements the enterprises are obliged to take inventories of assets and liabilities during which their availability, condition and evaluation is verified and confirmed. The objects and frequency of inventory is determined by the owner (manager) of the enterprise, unless its implementation is mandatory under the law. Pursuant to the Procedure for presentation of financial statements, approved by the Cabinet of Ministers of Ukraine dated February 28, 2000, No. 419, the inventory of assets and liabilities of the enterprise is necessarily performed before the preparation of the annual financial statements.

The results of inventory-taking are presented in the accounting in the following order [17]:

1. surplus fixed assets, goods, materials, securities, funds and other property are subject to posting and placing to accounts according to the income generated by the activity or an increase of funding;
   - Lack of values within the approved norms of natural loss is written off by the decision of the manager on costs or the reduction of funding;
   - Excessive lack of values as well as the loss due to deterioration is attributed to those responsible at the calculated amount of indemnification;
   - Excessive costs, lack of material assets and finished products, if the perpetrators have not been found, are attributed to costs or reduction of funding.

Thus, inventory-taking is an important part of accounting methodology as it forms accounting information that will be duly processed and presented in the reporting of the enterprise to internal and external consumers to make management decisions.

According to the IFRS, the objects of inventory-taking procedures are similar to those adopted in Ukrainian law for an inventory object, as an object of accounting, is the same for all accounting systems.
However, the very essence of the objects of accounting and the criteria for their identification in the reporting of Ukrainian enterprises in some cases come into serious contradiction with the IFRS. As a result, firstly, there is a need to take inventory of the property that is not in the financial statements made according to the current Ukrainian legislation, and vice versa, not to take inventory of assets that under the IFRS criteria lose their recognition. Secondly, because of the need for reclassification of a number of assets, the inventory-taking procedures are aimed at the objects accepted in the formation of financial statements prepared under both international and national standards of accounting, but are interpreted in different ways.

Inventory Reports and inventories are source documents. While taking inventory under IAS/ IFRS procedures, the enterprise independently can develop its own inventories (inventory reports). In establishing the objects for inventory-taking procedures under the IFRS it is necessary to take into account not only the changes in the property of the enterprise that have taken place in the transformation of financial statements under the IFRS, but also take into account the articles that influenced this change. Conclusion

In conditions when the role of financial reporting of business entities is increasing in the information support of globalization and business and it becomes a tool that helps meet the public needs, the methodology of financial reporting goes beyond the method of accounting. Moreover, with expansion of analytical accounting information to the limits of financial information the areas and volumes of public information needs are growing as the corresponding interconnections are considered. Hence, the interconnection between the examined objects at the level of transnational corporations, international and national level, as well as at meso level and macro level.

The organization of the media of accounting information requires compliance with features of accounting as a process of formation the evidence. Accounting as a process consists in stating that every economic fact is a phenomenon or process and must be, first of all, recorded on the media as a proof, i.e. as a document. From the source documents, i.e. the proofs of reality, the transactions are subject to mandatory recording (registration) and accumulation in the accounting registers. This means that the accounting registers after corresponding economic facts are recorded and necessary mathematical procedures are completed automatically become the media of accounting information. To ensure the trustworthiness of accounting data and financial reporting the enterprises must necessarily take inventory. These peculiarities provide interconnection of the quality of the analytical accounting information in financial reporting with the introduction of the International Financial Reporting Standards in Ukraine.

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ФІНАНСОВА ЗВІТНІСТЬ ТА ПЕРВИННА ДОКУМЕНТАЦІЯ УКРАЇНСЬКИХ ПІДПРИЄМСТВ
ПРИ ЗАСТОСУВАННІ МСФЗ

Проналаштовано теоретико-методологічні та практичні аспекти змін у фінансовій звітності та первинній документації, характерні для українських підприємств у нових умовах, пов’язаних із застосуванням міжнародних стандартів фінансової звітності. У тому числі запропоновано концептуальний підхід до визначення закономірностей змін у фінансовій звітності та елементах методу бухгалтерського обліку. Досліджено питання внутрішньої контролю взаємно обліково-аналітичної інформації на окремих етапах її формування.

Ключові слова: облікова-аналітична інформація, елементи методу бухгалтерського обліку, первинна документація, інвентаризація, фінансова звітність, Міжнародні стандарти фінансової звітності.

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ФІНАНСОВА ОТЧЕТНІСТЬ І ПЕРВІЧНІ ДОКУМЕНТИ УКРАЇНСЬКИХ ПІДПРИЄМСТВ
В УСЛОВИЯХ ПРИМЕНЕНИЯ МСФО

Проведен анализ особенностей финансовой отчетности и первичных документов, которые характерны для украинских предприятий в новых условиях применения международных стандартов финансовой отчетности. В том числе представлен концептуальный новой подход, позволяющий выявить тенденции изменений в финансовой отчетности и в специфических элементах метода бухгалтерского учета. Исследованы теоретико-методологические и практические вопросы внутреннего контроля качества учитыва-аналитической информации на отдельных этапах ее формирования.

Ключевые слова: финансовая отчетность, первичные документы, инвентаризация, учетно-аналитическая информация, Международные стандарты финансовой отчетности.

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The value descriptions of innovative entrepreneurship are considered. Nowadays it is a motive force of not only economy development but also the whole society. The important role of innovations in everyone’s life is shown. It is proved that innovations are also the means of survival for modern entrepreneurship in a changeable market environment. It is determined, that innovative activity is impossible without deep knowledge, scholarship and aspiration to improve quality of commodities, services, attain the put aims, realize a business-idea. It is researched, that passion adjusted people are able to initiate and carry out entrepreneurship innovative development. Important influence of spiritual, mental and ethical factors on entrepreneurs’ activity is analyzed. Absence of these factors in economic space during many years in Ukraine hasn’t resulted mass innovative character of entrepreneurship. It is established that for overcoming this situation it is necessary to appeal to the passionately spiritual sources, use traditional national values. Domestic entrepreneurship must obtain necessary spiritual energy in an order to become the leading factor of the Ukrainian economy innovative development, to provide its modernization, to carry out a transition to post-industrial society.  

Keywords: innovations, innovative entrepreneurship, value descriptions, passionarity, entrepreneur’s initiative, economy innovative development.

Problem statement. Nowadays the modern world has transformed into the environment of permanent innovations introduction that obtained mass and planetary character. Without innovations it is impossible to imagine life. Process of implementation, manufacturing and distribution new, improved products and services are provided by various enterprises: from small to the powerful multinational corporations. Entrepreneurship aims to be innovative. As it has become already not a necessity, but an exigency, a main condition of survival and existence in the market environment.

Innovative entrepreneurship is an economic activity that consists in creation and management an innovative enterprise with the aim of development, introduction and commercial use different kinds of innovations. Innovations in this case come forward as a specific instrument of innovative entrepreneurship [1].

Entrepreneurial innovative activity is directly related to knowledge improving, bringing innovative idea to developments of a concrete product, service or technology that have demand at the market, with settling to get an innovative income. Such activity expects realization the whole complex of practical measures on preparation and productive process organization, product and technology modification, personnel retraining for executing new job, application of new technologies, equipment, that is undertaken by the organizer of economic process – entrepreneur.

Any entrepreneurial activity is commercial on the nature, that is why in any case it provides income (profit) reception. But, similarly both relations between people are not limited to only the economic sphere and innovative activity can realize far outside entrepreneurial activity.

Under contemporary conditions in the developed countries of the world innovations become a powerful motive force of economy development and its competitiveness increase. In a counterbalance in the domestic economy innovations until now have become the decisive factor of development. The Ukrainian economy continues to keep uninnovative character. Thus negative tendencies in this field increase. For instance, from 2001 to 2011 the amount of enterprises that carry on innovative activity grew short almost on one third. For over 20 years of the Ukrainian independent economy development technological and innovative lag from the developed countries only has raised, its structure has become worse accordingly, in particular, part of engineer, science intensive industries diminished substantially, but part of raw material industries has grew into a decision role.

Analysis of the last researches and publications. The problems of research innovative development different aspects of modern entrepreneurship are observed in numerous scientific works of many well-known Ukrainian and Russian specialists such, as V. Geets, S. Glaz'ev, D. L'yov, A. Gal'chinsky, Y. Bzhal, V. Zyanko, V. Sizonenko, Y. Yakovec and etc. Unsolved earlier part of general problem. Many theoretical efforts are spared to the search of investments sources, priority directions determination their realization with the aim of embodiment in life the domestic entrepreneurship development innovative model. At the same time in existent researches it isn’t enough attention is spared to axiological aspect illumination of innovative entrepreneurship development.

An aim of the article is researching the role of spiritual, mental and ethical factors for providing modern innovative entrepreneurship development in Ukraine.

Statement of research main material. Long time in our society the point of view prevailed, that it is enough to give freedom to entrepreneurial initiative in an order to overcome technological lag, promote efficiency and competitiveness of our economy, provide its innovative development, to carry out economy contemporary modernization. However, as the real experience of economy development in post-soviet countries for past twenty years has certified, that hopes on the use of entrepreneurial initiative as a factor of innovative breach realization in these countries economies, progressive technological changes providing, initiation of the new technological structure development have mainly turned useless. Without regard to all efforts the role of innovative entrepreneurship in these countries and, especially, in Ukraine remains not high. In practice in spite of certain innovative potential of economic development presence in Ukraine, the effective mechanisms of its realization are absent until now. Besides "to the numerous problems of the past (innovations negativism by economic agents, the innovative system inerternce, slowness of realization the newest scientific decisions and input of technologies) the new was added, related to the loss of many scientific schools, science financing in unproper size, limit nature of investment sources for innovative development" [2, p. 86]. As a result of this science development in Ukraine remains mainly dissociated from activity of domestic entrepreneurship, which in majority do not have practically motivations to innovative activity.

In our view, one of leading reasons, that considerably stipulated innovative insolvency of modern entrepreneurship development, consists in that during market reformation of post-soviet economy from society eyeshot spiritual and mor-
ally-valued measuring of entrepreneurial activity fully turned out. Reformers-liberals dictated dogma to society, that it is enough to pass state property in the hands of private entre-
preneurs, as they automatically will grow into "effective own-
ers", will provide the economy growing, population welfare, country's prosperity on the basis of long-awaited innovative
development. The intracommunication of innovative function
that distinguishes entrepreneurship from business was abso-
lutely ignored thus, with its personality function that prede-
termines the motivational features of entrepreneurial activity,
in particular reason of innovative activity.

Consequently instead of innovations realization, pro-
gressive technological changes, that needs enormous ten-
sion of entrepreneurs creative forces, persistent overcom-
ing by them the real difficulties of forming the newest tech-
nological structures, the new entrepreneurship elite di-
rected their initiative and creative capabilities mainly on the
natural rent appropriation, substituting for depreciation and
investments by a current income, "privatizing" of workers
salary's part and on realization shadow practices doing
business. At these terms large business in no way could
grow into motive force of innovative development.

As the Russian scientist Y. Yakovets, innovative devel-
oment is able to initiate and carry out only the passio ad-
justed people [3, p. 313]. The passionarity spirit can give to
them emergency forces for decision and realization the
most difficult, incredibly heavy tasks, that need enormous
tension of all human forces and that it is impossible to de-
cide on principles especially material encouragement. Pas-
nionarity inspires people on the most powerful performing,
initiates their energy and possibility for successfully operat-
ing, to resist to the most dangerous situations, offer resis-
tance and overcome obstacles in unfavourable terms. The
passionarity spirit is generated by not aspiring to the prag-
matic aims of the personal enriching, not by the utilitarian
values of appropriation weal by a subject and economic
benefit receipt by an individual, but personality's service to
the high spiritual ideals, real mental and ethical values. The
prominent German philosopher F. Nietzsche, exposing to
criticism a Christian moral, forced to admit its necessary
property – ability to initiate person's spiritual energies:
"However moral owns not only various facilities of intimida-
tion., – it is able to "inspire" [4, p. 5].

Thus, entrepreneurship acquires the passionarity spirit,
when it is base on not simply realization of own private
interest, but on a desire to serve foremost to the higher
ideals, moral and spiritual values, on organic combination
of own private interest with social meaningful interests.
Known German economist and sociologist M. Weber, thor-
oughly analyzing motive forces of entrepreneurs innova-
tive-investment activity in west countries, proved to the
conditionality of this activity by the protestant moral norms.
The protestant appearing caused forming for entrepreneurs
attitude toward the economic activity as to implementation
of religious duties, that stipulated a grant by them absolute
priority to the aims of capital accumulation, investments
realization in entrepreneurship development due to self-
consumption interests sacrificing, assisted the observance of
ascetic way of life. The spirit of religious asceticism genera-
ates entrepreneurial passionarity that becomes the inno-
vative development source. "We can extend horizon of
Weber's conversation, – the outstanding Russian philoso-
pher O. Panarin, – and, leaning on modern data, to make a
conclusion, that not only protestant ethics is able to tame
the spirit of individualistic consumption in behalf on piling
up, but also other types of religious ethics. Yesterday's
Japanese and today's China economic miracles confirm
this. Confucius-Buddha's ethic complex with not less effi-
ciency tames irresponsibility of hedonistic individualism,
paradox is protestant ethics [5, p. 518].

Unfortunately, all these factors in no way influence on
behavior of most modern business entities in Ukraine. And
not only because the protestant does not have a historical
root in Ukrainian space. Clear that a person can think and
creatively operate, leaning on traditions of own history and
culture, and high socio-humanitarian and spiritual values
which are able to give the passionarity spirit to human ac-
tivity in particular to entrepreneurs innovative activity, have
the sources in national mentality and centuries-old spiritual
traditions of nation. Orthodox tradition formed its own re-
quirements to entrepreneurial activity. The most important
was considered the necessity of entrepreneurship public
utility. The unproductive use of wealth and entrepreneur's
aimed only on personal consumption were definitely repro-
bated [6, p. 443]. At the terms of the modern society secu-
arizing instead of religiously-spiritual motivation of entre-
preneurial activity, its aspiration on service to the high ide-
als, mental and ethical values there is "values" prevailing of
consumer society, so-called "moral" of success. The last is
engrained not in traditional religious values, but in liberal
ideology, that denies the metaphysical aspects of human
existence, absolutes the person autonomy as the individ-
ual, torn off not only from public values but also from higher
senses of personality existence. Thus, known representa-
tive of modern liberalism L. fon Mises wrote: "Liberalism
limits its attention entirely by earthly life and earthly aspira-
tions. ...It kept indoors outside an inherent to its area and
did not encroach on territory of religious faith or metaphysi-
cal doctrine" [7, p. 57].

Examining the utility of act as a criterion of its morality,
the modern "moral" of success on post-soviet space forms
entrepreneurial activity specific motivations, that have he-
donistic aspiration opposite to the religious asceticism
spirit. In other words the "moral" of success, directed to
benefit maximization and boundless satisfaction of modern
"economic person" selfish necessities, creates innovative
development antimotivation. For the Ukrainian business-
men highly inherently exactly this "moral" that turns their
actions to the immediate enriching in any method, gener-
ates their favour for shadow practices of entrepreneurial
activity, to power "privatizing" with the aim of lobbying their
own business interests. They give advantage to putting in
money not in entrepreneurship innovative development
(which needs large long-term investments that is deter-
mined by high risks in relation to their return), but in lobby-
ing their own interests, that at the modern level of corrup-
tion in Ukraine is considerably more cost-effective and reli-
able business, brings a rapid and safe return.

"Moral" of success prevailing in the modern secularized
society has become the result of its abandonment from
ascetic ethics values, which take the sources from Christi-
anity spiritual principles, and also other traditional religious
confessions, and its transition to hedonistic "ethics" qua-
sivalises of boundless consumption. It deprived modern
entrepreneurship from the passionarity spirit, that gener-
ates innovative character of entrepreneurial activity.

Answering a question, why didn't innovative entrepre-
neurship potential effectively realize in Ukraine and other
post-soviet countries, which successfully providing econo-
my modernization at first in the West countries, later in
many East countries on the basis of modern innovative
breath, we must pay attention to forming post-soviet entre-
preneurship elite in 90th of XX centuries peculiarities that
explain the specific of its psychological features and sym-
pathy to original "moral" values. "Why is in our entrepreneur-
ship community such high percent of criminal relations and 
corrupibility"? – asking the Russian scientist N. Narochutska 
and answering this question thus: "Because entrepreneur-
ship was interested for, I do not want to say about all, but far 
greater percent, than in European tradition, people with ad-
venturous character, without moral taboos" [8, p. 47].

Exactly this is largely explaining a difference in attitude 
toward difficulties that unavoidable accompany innovative 
activity of large western companies and Ukrainian large 
business representatives. It is known that large western 
companies that carry out innovative activity, on the stage of 
mastering new technical and technological achievements 
run not only into technological difficulties but also with con-
siderable financial complications, in particular with substan-
tial reduction of incomes or even with losses. So, for ex-
ample, the American company "General Electric" got 
losses in 120 million dollars at the production the unique 
automated plants of the future. Company "Cincinnati Mila-
cron" only after ten years was able to get income from the 
production of robots. The large corporation of the USA "General Motors", beginning from 1980, invested 40 mil-
lion dollars in the all plants modernization program, but 
it was pursued by failures. But all these failure do not restrain 
large companies favour to innovative development. Relying 
on future incomes, opening potential possibilities of scient-
ific and technical progress new directions, reduction prices 
of products and increase their quality, they do not afraid 
initial high costs and difficulties in organizing innovative 
activity, which are considered necessary, as expect large 
benefits that later will be brought by mastering new techni-
cal and technological achievements [9, p. 260]. Similar 
economic behavior, directed to realize long-term strategic 
gains of innovative development, is not absolutely charac-
teristic to modern entrepreneurship elite in Ukraine.

Conclusions. For achieving by the Ukrainian entrepre-
neurship according to classic views of confessed economists-
theorists, in particular J. Shumpeter, immanent innovative 
character, we need such entrepreneurial elite, which eco-
omic behavior is predefined by the new valued code and 
motivations based on it. Just the same passio adjusted elite, 
which entrepreneurial activity motivations include not only 
economic, but also higher, competent to inspire on serving to 
the large aims, will be able to undertake a hard work: innova-
tive breach realization in country's modern economic devel-
opment. The action of motivations able to inspire on serving to 
the large aims is related to the entrepreneur's presence of 
capacity for "acts and aims moral self-regulation", that "arises 
only out of education in the certain values system". Basis of 
morality in any society – Catholic, Protestant, Orthodox, Mos-
lem are religious canons that set for earthly life moral scope, 
clear ideas about a sin and respectability" [8, p. 37]. Thus, only 
appealing to the passionarily spiritual sources, basing on tradi-
tional national values, The Ukrainian entrepreneurship is able 
to obtain necessary spiritual energy in an order to become the 
leading factor of our country innovative development, to pro-
vide its contemporary modernization, to carry out a transition 
to postindustrial society.
The article is dedicated to the development of new and improvement of existing theoretical and methodological basis of forming and developing the market of organic products, its correspondence to the present-day situation, determination of problems and ways of their solving, introduction in practical activity of Ukrainian enterprises. The main objective of the article is to determine the specific features of forming and developing organic products market in Ukraine, and the perspective directions of its development based on analysis and practice of functioning of such markets in the world. The environmentally sound products market in the world is being analyzed, some information on the countries with the most commodity turnover of organic products, structure of international market of organic products, volumes of sales of organic products in the European countries is provided. As a result of studying the modern trends of economic development the authors reach a conclusion on problems of standard introduction, investigate the European norms and requirements for organic products. The conducted research allows distinguishing the basic features of Ukrainian market of organic products: it quickly grows, which makes it especially appealing for the participants of market relations, however entry into this market requires considerable capital investments and is characterized by high risk; criteria for qualifying products as environmentally sound products are unstructured and unclear. The potential for growth of organic products market in Ukraine is examined.

Keywords: environmentally sound products; organic product; standard; market of environmentally sound products.

Problem definition. The specific feature of development of Ukraine in the last decade is an activation of globalization and integration processes, which creates a desire for reaching the higher level of economic development and life. In the process of development certain difficulties arise, which are namely the need to create the new forms of economic activity organization and production; market dictates its conditions. By building a new economy and reaching a whole new level of development, it must be understood that not only the quantitative indexes of life sustenance are changed but also whole new demands of society, standards of life, requirement for quality of life and environment appear. All progressive community is aware of the fact that man and nature are indivisible and single whole, interdependent and complementary. Such questions as building "green" society, taking into account an ecological component by creating trends of the economic growth, ecologizations of economy as a the whole, development of the market of environmentally sound products and services, providing population with high-quality and environmentally sound products of domestic manufacture acquire actuality.

It is necessary to point out that market of environmentally sound products and organic products is already developing in Ukraine, irrespective of existing legislative conflicts and imperfections, financial problems and limitations. Thus, development of new and improvement of existing theoretical and methodological basis of forming and developing the market of organic products, its correspondence to the present-day situation, determination of problems and ways of their solving, introduction in practical activity of the Ukrainian enterprises are relevant.

Analysis of the recent researches and publications. Problems of ecologization of economy, methods of estimation of the damage caused by anthropogenic activity of man, methods of research of enterprises taking into account the ecological component, the matters of forming and developing the market of environmentally sound products are analyzed and discussed, particularly in papers by V. Artyshev, V. Basylevych, N. Galech'yan, O. Geydt, J. Guseva, L. Deynko, G. Kupalova, D. Legeza, V. Pindus, V. Rekunenko, P. Stetsyshyn, E. Khlobystov, E. Shelud'ko and others. Such large number of publications on the said subjects is explained by the fact that these matters concern vital issues, such as ecological safety of the state, food safety, health of nation, life of the future generations. Despite the extended coverage in scientific publications, some matters remain to be not fully revealed. Among them the specific features of the development of organic products market in Ukraine are especially noteworthy.

The main objective of the article is to determine the specific features of forming and developing organic products market in Ukraine, and the perspective directions of its development based on the analysis and practice of functioning of such markets in the world. In accordance with the objective to be achieved the following tasks are set:

- to distinguish the specific features of forming and developing the market of organic products in Ukraine;
- to analyze the existing worldwide trends;
- to define the perspective directions of the development of organic products market in Ukraine;
- to provide rationale for the ways of realization of the main programs for development of organic products market.

General scientific and special methods are used in a paper in order to study processes and phenomena in their interconnection. The fundamental provisions of economic theory, scientific researches by domestic and foreign scientists in the field of ecological entrepreneurship, ecological policy, ecologization of economy, theory of management of complex social, ecological and economical systems are the theoretical basis of research.

In order to study the said matters in focus the methods of logical, economical analysis, comparison method, systems analysis method, and the methods of synthesis, induction, deduction, and analogies, are being applied.

Presentation of basic material of research. In recent years Ukraine and planet as a whole went into a long and deep ecological crisis. The further exacerbation of this crisis forces to search for such ways of development of economies, which would take into account its ecological component and include it in the number of priorities.

Operating under the conditions of competitive market brings ecological market to the level of active sector of the economy. It is a new non-traditional segment of the market of environmentally sound products, services and technologies, the products of which are used for providing and maintaining ecological safety of population and environment as a whole. In this market the manufacturers offer environmentally sound products, technologies of their manufacture, and also services to ensure ecological safety (including development and introduction of relevant nature protection and energy-saving technologies), increasing the level of ecological education, wide range of analytical, project, expert and consulting services. The development
of the market of environmentally sound products and services promotes the sustainable utilization of natural resources, introduction of innovations, related to scientific and technical progress, leading to quality improvements in organization of production, producing large economic, social or ecological effect.

Over the last two decades the world market of environmentally sound products is booming and becoming a popular alternative to the consumption of harmful and environmentally unsound products. In 2012 its world volume amounted to 40 billion US dollars, the annual rates of growth in developed countries are 20-30 % [6]. Currently, more than 250 thousand enterprises engaged in organic production are operating in Europe. About 10 million hectares of land is used for organic farming, which is about 2 % of all lands, used for cultivation of agricultural products. The largest amount of lands used for organic production is in Austria, Sweden, and Switzerland (from 10 % to 19 % per farm) [18].

According to the data of FiBL and IFOAM international agencies today organic products are produced in 160 countries worldwide, and a number of countries, which have implemented organic regulations, has reached 84. Thus, the largest manufacturing countries of organic products in the world market are shown in Table 1.

**Table 1. The largest manufacturing countries of organic products, 2012**

<table>
<thead>
<tr>
<th>No. of position</th>
<th>Country</th>
<th>Amount of manufacturers, units.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>India</td>
<td>400 551</td>
</tr>
<tr>
<td>2</td>
<td>Uganda</td>
<td>188 625</td>
</tr>
<tr>
<td>3</td>
<td>Mexico</td>
<td>128 862</td>
</tr>
<tr>
<td>4</td>
<td>Ethiopia</td>
<td>123 062</td>
</tr>
<tr>
<td>5</td>
<td>Tanzania</td>
<td>85 366</td>
</tr>
<tr>
<td>6</td>
<td>Peru</td>
<td>44 827</td>
</tr>
<tr>
<td>7</td>
<td>Turkey</td>
<td>43 096</td>
</tr>
<tr>
<td>8</td>
<td>Italy</td>
<td>41 807</td>
</tr>
<tr>
<td>9</td>
<td>Spain</td>
<td>27 877</td>
</tr>
<tr>
<td>10</td>
<td>Mali</td>
<td>27 771</td>
</tr>
<tr>
<td>11</td>
<td>Ukraine</td>
<td>155</td>
</tr>
</tbody>
</table>

Source: [13].

The volume of sales in the organic markets of the world is rocketing. Thus, if in 1999 it was 15 billion US dollars, by 2010 it amounted to 59 billion US dollars. According to the leading experts it will increase to 90 billion US dollars in 2015. Thus, as compared to 1999 it will increase 6 times. Such rates of market growth make this segment appealing for investors.

**Table 2. Countries with the largest commodity turnover of organic products, 2012**

<table>
<thead>
<tr>
<th>No. of position</th>
<th>Country</th>
<th>Commodity turnover of organic products, million euro</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>USA</td>
<td>20 155</td>
</tr>
<tr>
<td>2</td>
<td>Germany</td>
<td>6 020</td>
</tr>
<tr>
<td>3</td>
<td>France</td>
<td>3 385</td>
</tr>
<tr>
<td>4</td>
<td>Great Britain</td>
<td>2 000</td>
</tr>
<tr>
<td>5</td>
<td>Canada</td>
<td>1 904</td>
</tr>
<tr>
<td>6</td>
<td>Italy</td>
<td>1 560</td>
</tr>
<tr>
<td>7</td>
<td>Switzerland</td>
<td>1 180</td>
</tr>
<tr>
<td>8</td>
<td>Japan</td>
<td>1 000</td>
</tr>
<tr>
<td>9</td>
<td>Australia</td>
<td>986</td>
</tr>
<tr>
<td>10</td>
<td>Spain</td>
<td>905</td>
</tr>
<tr>
<td>11</td>
<td>Ukraine</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: [13].

Today 1.8 million manufacturers are engaged in production of organic products (in 2001 their number amounted to 246.9 thousand). The growth of world market is ensured by the growing demand for organic products in the developed countries and concern for quality of life of population. Currently the demand for organic products is concentrated in 2 regions: the North America and Europe. Denmark, Austria, and Switzerland are among countries with the largest sales exposure. Specifically, the largest amount of expenses on organic products in terms of per capita accounts for the same countries (Table 3).

**Table 3. Structure of international market of organic foods, 2012**

<table>
<thead>
<tr>
<th>Country</th>
<th>Market share, %</th>
<th>Sales exposure of organic foods, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>45</td>
<td>4.0</td>
</tr>
<tr>
<td>Denmark</td>
<td>1.2</td>
<td>7.2</td>
</tr>
<tr>
<td>Austria</td>
<td>1.3</td>
<td>6.0</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3</td>
<td>5.7</td>
</tr>
<tr>
<td>Sweden</td>
<td>1.4</td>
<td>4.1</td>
</tr>
<tr>
<td>Germany</td>
<td>14</td>
<td>3.5</td>
</tr>
<tr>
<td>Luxemburg</td>
<td>1.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.5</td>
<td>2.7</td>
</tr>
<tr>
<td>Canada</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td>France</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Ukraine</td>
<td>0.4</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: [13].
At the same time there is an increase in average expenses on organic products per capita in the European countries. On the average this index has increased 1.4 times over the last two years (Table 4).

<table>
<thead>
<tr>
<th>Countries</th>
<th>Average expenses on organic products per capita, euro</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>Germany</td>
<td>38</td>
</tr>
<tr>
<td>Italy</td>
<td>24</td>
</tr>
<tr>
<td>Switzerland</td>
<td>103</td>
</tr>
<tr>
<td>Sweden</td>
<td>47</td>
</tr>
<tr>
<td>Ukraine</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: [16].

The main reasons for growing demand for organic products and increased expenses on such products are the poor quality of ordinary products, public mistrust and the lack of exhaustive information in relation to the genetically modified products and components, ecological food crises of the last decade.

In the developed countries of the world the governments actively support ecological production since it contributes to strengthening of internal market, the increase of export and helps to solve economical and ecological problems. Today 32 countries of the world have fully adopted standards for environmentally sound products; 9 countries are engaged in implementation of standardization; 15 countries are engaged in development of such standards [16]. However, the world experience shows that the state supports certain project only when it starts bringing profits and becomes part of economy. The experience of the USA is the most demonstrational one in the noted context. Thus, the idea of environmentally sound products was born in the USA in the 60s. Initially it was some kind of anti-culture protest against the contamination of planet, and abuse of nature. Sellers and customers were not understood, considered to be obsessed with their health. The range of ecological products was small, the prices were very high, and they could be purchased only in rare specialized stores. Gradually, more and more people began to consume environmentally sound products, and rare farms, engaging in cultivating organic products, started to expand and become large companies. At the same time the state began to pursue a policy of standardization of organic products.

Presently, the greatest recognition was gained by the ISO international standards of 9000 series. In many countries, among which there is also Ukraine, they are accepted as national standards. In our country these series of standards have been brought into force on October 1, 2001. The main idea of developers of this version is that all standards, relating to the protection of environment and quality of life of population, must be based on single scientific and methodical basis. Thus, development and implementation of scale projects for environment protection is impossible without introduction of international standards [15].

Modern trends of development of the economy require the enterprises to introduce ISO standards, regulating the procedure for work in the field of ecological management. The idea of ecological standardization of products was introduced for the first time in Great Britain in 1992, when a standard was worked out for the system of ecological management BS 7750, which was included in the British system of standardization. In accordance with this standard, the level of contamination of environment, the expenses on the production of goods et cetera fall under the regulation. In 1993 this standard was adopted by the countries of the European Union. Today, Netherland, France, Sweden, Spain, Ireland and other countries adopt this system of standardization. Also the ISO committee has worked out a special system of standards ISO 14000, which regulates ecological standardization of products.

The content of the national American standards for organic products includes: prohibition on the use of artificial chemical fertilizers; prohibition on application of genetically modified technologies; prohibition on the use of growth-promoting substances and fattening, antibiotics and hormonal agents, and also the use of foodstuffs, which are not created on the basis of organics.

Alongside with the law on the National Standards the mandatory certification was introduced, aimed at ensuring that manufacturers and sellers of organics clearly follow the National Standards – not a single uncertified product can be labeled as "organic".

Clear classification of environmentally sound products was adopted, which, in our opinion, is feasible to take as the basis in Ukraine:

1. Natural Products are products, wholly or at least mainly consisting of the ingredients of natural origin, with a minimum of chemical substances, artificial fillers etc. Natural products include primarily Organic Products. It would be more correct to call them "environmentally sound products", namely foods, cultivated on specifically purified soil, without chemicals, using only natural fertilizers, such as fertilizer manures, composted fertilizers etc.

2. Functional Foods are products with artificial addition of healthful substances, increasing the body protective functions (for example, orange juice with addition of Echinacea).

3. Nutraceuticals are the accessory food substances, increasing the nutrient value, for example, the vitamins. They must be of natural origin. The majority of them are various plant extracts.

Organic products in the world market are divided into four types. Depending on how the products were cultivated, they are divided into:

1. 100 % organic (must contain 100 % certified ingredients);
2. Organic (must contain more than 95 % certified ingredients; there are limitations in relation to the methods of production; no more than 5 % inorganic substances are allowed);
3. Those made of organic ingredients (must contain more than 70 % certified ingredients; there are limitations in relation to the methods of production; no more than 30 % inorganic substances are allowed);
4. Less than 70 % organic products (may contain only a small amount of organic substances).

Despite the voluntary application of this system, the number of companies, which introduce it in the practice of their business activity, is growing worldwide. The main reasons, which make companies apply these standards are the following: the expenses on production decrease due to more rational use of resources; ecological problems, related to contamination of environment, are solved; competitive status of enterprise increases in the market; there is a higher possibility of entering the markets of "green technologies";
some banks in the European countries do not provide loans without the ecological substantiation of a project; demand for products increases and so on.

Unfortunately, it is too early to talk about the national system of certification, since today the production of organic products in the country is certified by the representatives of foreign companies, operating in accordance with the regulations and standards, existing in the countries of the European Union, and sometimes in the USA and others. There are about twelve foreign certifying structures in Ukraine. For example, such companies as Control Union (Netherlands), IMO (Switzerland), Etco, Lacon, and also the representatives of Italy, Germany, Hungary, Poland and other countries have been working for a long time now. In 2009 the Ukrainian structure "Organic Standard" has obtained an international accreditation for the right to conduct an organic certification. The enterprises have the right to independently choose the certifying institution. Confirmation of certificate must take place annually [7].

It should be noted that organics is not only food products, but the whole variety of goods, such as beauty care products, clothes, hygiene items, and they cannot conform to the standards, worked out mainly for food industry. Presently, the new standards for these products’ groups are being developed by the US Trade Association for organics. Everyone, who is involved in cultivation, manufacture and preparation for sale of organic products, must obtain a certificate. Specifically, these are not only manufacturers but also people, engaged in receipt, delivery, treatment, packing and storage of organics. Introduction of standards has a positive impact on the entire ecological industry in the USA. Their presence contributed to a more free import and export of products, also having brought additional funds to the budget and having allowed extending the product market. In addition, consumers began to pay less attention to the high prices on organics, since now they can be sure that they get exactly what they have paid for. Industry of production of environmentally sound products has become a business, bringing good profits. Over the last 10 years this market has increased annually by 20-25 %. In 2010 the sale of environmentally sound products have reached 22.9 billion US dollars, or 3.6% from the general volume of food products market in the USA [12].

It should be emphasized that in Ukraine the focus on environmentally sound products is associated with a certain risk, which lies in the fact that certain category of consumers does not perceive environmentally sound products on the offered prices. Therefore, production and sales expenses do not pay off and enterprises do not rush to solve this problem. In addition, a concept of "Environmentally sound products " is not clearly defined in our state and it is extremely difficult to do this today, because at all stages of production, transportation and storage a product must not change its properties and should bring its natural characteristics as much as possible.

The conducted research allows distinguishing the basic features of Ukrainian market of organic products:

1. It quickly grows, which makes it especially appealing for the participants of market relations, however entry into this market requires considerable capital investments and is characterized by high risk.

2. Criteria for qualifying products as environmentally sound products are unstructured and unclear. Many consumers consider a prefix "bio" to be a guarantee of ecological cleanliness; generally a term "ecological cleanliness" is interpreted by all (100%) respondents as absence of preservative agents, synthetic fillers and coloring agents.

3. The separate and very important segment of consumers of environmentally sound products was formed; these are the children. The scientists have proved, that if a child uses a feeding nipple or soother, made from material injurious to health from the first day of life to 1.5 years, the amount of nitroso compounds, which can get in the child's body over this period of time, is from 700 to 1100 micrograms. Such amount can cause not only allergic reactions but also metabolic disturbance in the child's body. Thus, a production of environmentally sound products can become a special business card of Ukrainian economy, which will allow improving the image of domestic products in the world market, increase the volumes of investment promotion for development of agricultural sector and related industries, and certainly have a positive impact on socio-economic and cultural development of our country.

We believe that the ability of Ukraine to sustain compliance with the international standards and to be able to meet competition in the world market of organic products is quite high. This can be explained by the following reasons:

1. Some Ukrainian plants are poorly cultivated in the West or not cultivated at all, and some domestic, for example, wild-growing berries, mushrooms, and medical plants simply have no world analogues. According to experts’ estimations, development of Ukrainian industry of ecologically sound agriculture is showing potential in such directions, as an ecological plant growing, seed farming, production of industrial crops and market of wild crops.

2. State standards for ordinary Ukrainian products, which are stricter than in the West. Amount of mineral and organic fertilizers, used in our country, is ten times less than in many developed countries, for example, 11 times less than in the USA, and 23 times less than in China [14]. In addition, in Ukraine much less chemical protection agents are used from variety of vermins and diseases in the fields. In this case this fact becomes positive: there are less chemicals in domestic food products, than in imported ones, which makes them more desirable both in internal and international markets.

According to the experts, market of environmentally sound food products in Ukraine will increase in 2013 by 100 %. "Deutsche Welle" reports that Ukrainians already refuse to use genetically modified products and pesticides, and are ready to pay more for environmentally sound certified products. According to the survey, 79 % Ukrainian residents wish to see organic products, cultivated without using chemical fertilizers and pesticides, and certified in accordance with the European quality standards, on their tables. However, now only 0.1 % from the sales of food products in Ukraine is the organic product.

According to Vasily Pindus, the chairman of "Bio lan" Association, a very small number of manufacturers are willing to invest money in the environmentally sound production and processing. However, he is sure that situation will change after a law on organic production starts to work. "Now among the obstacles for development of this business are the difficulty to cultivate organic products, insufficient amount of networks, selling these products, lack of state financial backing, insufficient investing in this industry and independent certification". V. Pindus believes that Ukraine has a great potential in this sector, given that the world market of the ecologically cultivated food products amounts to 40 billion euros, while in Ukraine it is only 1 million euro.

Today, in the Concept of state program for development of organic production in Ukraine the organic products are considered to be such products in the process of manufacturing of which:

- in the plant growing it is prohibited to use chemical pesticides to deal with weed plants, vermins and plants diseases, and also mineral fertilizers of synthetic origin;
specifically plants protection is carried out mainly by using agents of natural origin, while organic fertilizers are used for feeding soil and plants; the use of genetically modified organisms is categorically forbidden; in a stock breeding it is prohibited to apply growth-promoting substances, hormones and antibiotics; prophylactic remedies and homeopathic medicines are used for treating animals.

Only those products can be referred to as organic, which are manufactured in accordance with the approved rules (standards), and a production has undergone the procedure of certification in accordance with established procedure. Specifically organic products are labeled as required. The label shall include a relevant logotype as well as information about the corresponding certification authority.

Ukraine, having considerable potential for production of organic agricultural products, their export, and domestic consumption, has achieved certain results in development of own organic production. Thus, the area of certified agricultural lands in Ukraine, used for cultivating various organic products, is more than a quarter million hectares; our state ranks honorable No. 21 among the world’s leading countries of organic movement. The share of certified organic areas of the total agricultural lands in Ukraine is almost 0.7 %. Specifically Ukraine ranks No. 1 in the East-Europe region in relation to the certified area of organic plough land, specializing mainly in production of cereal, pulse and oil crops. In addition, 200 thousand ha of wild crops are certified in our state. In the past three years there is a tendency of filling of internal market with own organic products due to establishing own processing of organic raw material. In particular, these are cereals, juices, syrups, jams, vegetables and fruits, dry fruits, honey, meat and milk product.

The IFOAM official statistical reviews confirm that if in beginning of 2003, 31 farms have been registered in Ukraine, having received a status of “organic”, at the end of 2011 in Ukraine there have been already 157 certified organic farms, and the total area of certified organic agricultural lands amounted to 270330 hectares.

According to data of the Federation of Organic Movement of Ukraine, the modern internal consumer market of organic products in Ukraine have begun to develop since 2006-2007, and numbered 600 thousand euros in 2008, 1.2 million euros in 2009; in 2010 this figure has increased to 2.4 million euro, and in 2011 it has increased to 5.1 million euro [16]. However, relatively slow development of organic production in our country is mainly due to the incompleteness of legislative and legal and regulatory framework, which could clearly define public policy in the field of organic production, create conditions for legislative recognition and protection of organic products, formation of the national system of certification, adoption of rules, standards and a clear, effective system of state support and promotion of organic production development.

So far there is no single domestic legislative instrument, which would regulate the organic production in Ukraine. Accordingly, domestic manufacturers undergo the procedure of organic certification of their production according to existing international standards; mostly these are the norms of the European Union.

However, today the state is trying to support this sector of economy. Through implementation of government's purpose-oriented Program of village development until 2015 it is planned to increase the volume of organic products' share in the total volume of gross agricultural products by 10 percent, to promote the conduction of organic agriculture, to standardize development of organic farming agriculture and establish a system of its certification.

It is worthwhile noting that Verkhovna Rada of Ukraine has passed the Law of Ukraine “On organic production” on April 21, 2011. The document defines legal, economical, social and organizational frameworks of conducting organic agriculture, requirement for cultivation, production, processing, certification, marking, transportation, storage and realization of organic products and raw materials. The law entered into force on April, 2012.

Passing the Law is very relevant for our state, since it allows starting development of full package of regulatory acts to form effective legislative framework of the European level and create real legal environment for providing business entities of organic direction with equal conditions for operating. The main advantages of development of environmentally sound products market in Ukraine will be the following:

- Organic products are safe for man and environment; they are not contaminated by nitrates, heavy metals, residues of pesticides, herbicides and other substances of chemical synthesis.
- Organic products do not contain pathogenic organisms, parasites and allergenic components.
- Organic products do not contain genetically modified organisms and substances, produced from them.
- Organic products retain nutritive properties, quality, safety and natural ingredients at processing, since only natural methods of processing and traditional recipes, natural substances and materials are used for packing; the use of aromatic chemicals, preservative agents, additives and others is forbidden.
- The use of organic products indirectly contributes to the preservation of the environment, namely has a positive impact on reproduction of natural fertility of soils, helps to increase natural biodiversity; improves the health of the animals, as such methods are applied for their keeping and which are connected to their natural needs and do not cause suffering to the animals.

Unfortunately, by introducing the methods of ecological production, the following problems associated with it should not be forgotten, these are namely:

1. The expansiveness of projects of ecological agricultural production. The main and, perhaps, the most expensive problem of the Ukrainian farms is a lack of necessary equipment for including the certified fertilizers and place for their proper storage, lack of equipment for mechanical withdrawal of weeds and lopping of branches, and sprinkling systems. Financial expenses, required for introduction of these technologies, amount to 200-1000 dollars per 1 hectare for grain crops and in 5000-8000 dollars per 1 hectare for cultivating fruits [6]. However, such production is considered to be very profitable, because it offers products of a better quality and guarantees to the manufacturer higher prices on realization.

2. Lack of certified lands (in Ukraine only 0,003 % of the total area of all agricultural lands). Their certification can take at least four years provided that cropping history and other documentation were properly maintained, and the chemical soil conditions correspond to the acceptable levels.

3. Increase of time expenditures and economical costs on production of environmentally sound products, which are several times higher than the time required for production of ordinary products. For example, two years are needed in order to cultivate environmentally sound wheat, and 6 months – to raise chickens.

4. Pre-sale preparation of goods, their storage and shipping. Since the volumes of environmentally sound products are relatively small, it is necessary to ensure avoidance of risk of mixing them with the other inorganic products.
5. However, the main factor, which puts a break on this market development in Ukraine, is a lack of state standards for environmentally sound products. The lack of clear definition of concept "Environmentally sound product" (organic or bioproduct) and mass unauthorized marking lead to discrediting of the concept among consumers. Some market experts insist that using the term "environmentally sound" should not be allowed, as in Ukraine the criteria for estimation of ecological friendliness have not been worked out yet.

Conclusions of research and prospects for further development. Basic indexes, adopted in international practice, which give evidences of the growth of organic products market, are the number of manufacturing countries, number of manufacturers in a particular country, country’s share in the general structure of international market, area of organic lands and their growth, level of consumption per capita and variety of organic products. The conducted analysis allowed distinguishing the main problems of forming and developing the organic products market in the short term. Thus, the main factor, which slows down its development in Ukraine, is the lack of the centralized state policy, poor development of necessary infrastructure, which creates additional risks for this sector of economy and reduces investment attractiveness for business. The specific features of the Ukrainian market are the lack of coordination and weak links between farms, distributors, consumers and suppliers of organic products. Lack of systematic approach to solving complex problems of organic products market hinders introduction of the newest technologies of production, processing and storage of organic products. Due to the low-level standard of living of country’s population, there is no stable and growing demand from consumers for such products. Thus, development of organic products market in Ukraine is the promising sector of economy, as evidenced by the experience of European and other countries. Stable and positive dynamics of its development can be achieved provided that there is a results-oriented and stable state support.

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ОСОБЛИВОСТІ РОЗВИТКУ РИНКУ ОРГАНИЧНОЇ ПРОДУКЦІЇ В ЄВРОПЕ

У статті розглядається світовий ринок органічної продукції і особливості його розвитку в Україні. Авторами досліджується се-

земент ринку екологічно чистої продукції, переваги і перспективи його розвитку, основні проблеми впровадження методів екологічного виробництва у світовому масштабі та в Україні. У роботі об’єднано причини та потенцій можливого зростання конкурентоспо-

роможності країн на світовому ринку органічної продукції.

Ключові слова: екологічно чиста продукція; органічна продукція; стандарти; ринок екологічно чистих товарів.

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ОСОБЕНОСТИ РАЗВИТИЯ РЫНКА ОРГАНИЧЕСКОЙ ПРОДУКЦИИ В УКРАИНЕ

В данной статье рассмотряются рынок органической продукции в целом и особенности его развития в Украине. Авторами ис-

следуется сегмент рынка экологически чистой продукции, преимуществ и перспективы его развития, основные проблемы внедре-

ния методов экологического производства в мировом масштабе и в Украине. В работе обоснованы причины и потенциал возможного роста конкурентоспособности страны на мировом рынке органической продукции.

Ключевые слова: экологически чистая продукция; органическая продукция; стандарты; рынок экологически чистых товаров.
AN ECOLOGICAL-ECONOMIC CONVERGENCE: TRANSITION TO SUSTAINABLE ENERGY

Sustainable energy development is complex challenge, so only complex decisions and approaches could be possible to implement in the most efficient way. There is still open question – what is the optimal volume of new energy resources using to support sustainable development and environmental safety for any state of the world. Article deals with the availability of convergence to serve for the more effective usage of analytic and system approaches for modeling ecological-economic spillovers in the case of transition to sustainable energy. The economic effects of sustainable energy transition are considered. The analysis of dynamic of energy consumption in the scale of different type of resources during 1820-2030 years depicted the situation of complicated analysis of "economy-energy-environment" linkage. It arises the agenda of necessity to implement complex approaches for modeling and forecasting of new energy systems development. Different types of models and techniques to analyze economy-energy systems are listed and compared.

Keywords: energy consumption; convergence; model; energy resources.

Introduction. Energy conservation and energy efficiency become a priority areas of energy policy in increasing number of countries, due to shortage of fuel and energy, increased anthropogenic impact on the environment, inadequate own stocks of resources and the increasing need for them. World economic standard of the previous century was the continuous and rapid growth in production and consumption, primarily due to the organic nature of energy – oil, natural gas and coal. Despite annual growth investments in R&D of renewable energy, it is likely that global energy demand will be satisfied mainly by traditional sources.

Minimizing adverse effects of the energy processes on the environment, along with providing energy security, the development of competitive energy market became bases of the energy policy of the European countries. Mitigating environmental impact of energy activities challenging, yet creates new opportunities.

WORLD ENERGY OUTLOOK 2012 FACTSHEET give some answers and challenges "How will global energy markets evolve to 2035?", some of them are following:

1) Taking all new developments and policies into account, the world is still failing to put the global energy system onto a more sustainable path.

2) Emerging economies drive global energy markets.

3) Energy subsidies are essential to the growth in renewable energy, especially in the power sector, as many renewable resources are still more expensive than conventional sources.

Status of new and renewable energy production is under consideration as on the level of scientists [1-4] but mainly on the level of policy makers (local and international policy) [5-7]. There is strong believe that increasing the part of the renewable energy resources will lead states to the sustainable economic development. There are increasing number of literature, publications and releases that prove and provide evidence for positive economic effect of new energy era [3-4, 8]. However, all of them remark that the transferring to such energy usage is mostly expensive, and not so rapid and appropriate for every state [9-10]. More and more reports claim that developed countries can easily to change their system of energy consumption – that really increases their environment security, economic development. But for most developing states, countries under transition such new energy programme is no budget, and even happen not same spillovers are considered.

There is evidence that some states become "greener" at the expense of other mostly less developed states.

The challenge is to find out that exact optimal point under which the defined exact portion of different energy sources be used and will led to equal, maximum positive effect for all states over the world – so it will be optimum for the Earth needs. Such the optimum energy resource consumption point that would provide the most economic development and the less ecological pollution – is not found yet, and studies devoted to such research are still in shortage.

The main aim of this paper is to consider possibilities of analytic and calculative approaches to be implemented for ecologic-economic spillovers modeling in the case of transition to sustainable energy, and for the search of optimum point mentioned latter.

An ecological-economic convergence. The idea of convergence in economics (also sometimes known as the catch-up effect) is the hypothesis that poorer economies’ per capita incomes will tend to grow at faster rates than richer economies [11]. As a result, all economies should eventually converge in terms of per capita income. Similar concept could be implemented for the convergence of environmental standards. Same definition can be transferred on the ecological-economic contradiction: less-environmentally friendly economies per capita emissions will tend to grow at slower rates than richer economies. As a result: all economies should eventually converge in terms of "green economy" and energy consumption. But the opposite side of this coin: race to bottom.

The exact place where convergence principals appear – ecological problems of modern world have the economic approach in their basis. So without convergence of knowledge between economic theories, modeling approach and ecology it's fully impossible to calculate any environmental costs in their real complex scale (especially at the international level).

What we knew before? And what we know nowadays? Conception of the economic process treats the economy as an independent, self-regulating and self-sustaining system whose productivity and growth are not seriously constrained by the environment (Fig 1.). Expansionists treat the economy as an open, growing, independent system which, because of technological innovation, lacks any fundamentally important connectedness to the 'environment' (which is therefore treated as infinite). Ecological economists argue that conventional economic development models are responsible for, or at least aggravate, the sustainability crisis [10].

Fig. 1. Linkage "economy-energy-environment"  
Source: authorial computation
The first step toward understanding this interpretation is to recognize that despite all our modern gadgetry, human beings remain ecological entities. Ecological economics sees the economy as an open, growing, wholly dependent subsystem of a materially-closed, non-growing, finite, ecosphere [10].

According to the environmental economics, an environmental resource deserves economic treatment only if it is ‘relatively scarce’ and is capable of generating utility to the individuals whereas. The ecological economics treats almost all the ecological resources as equally important in their analysis, irrespective of whether a resource is ‘economically’ scarce or not. The utility-based approach in the environmental economics is that the resources should be protected for improving the welfare of the individuals [12].

Economic mechanism of environmental regulation – complex multi-level relationships between entities themselves and with the parent bodies (Fig. 2).

The connecting arm of this relationship should become an environmental audit (EA) and economic-environmental modeling (EEM) – tools that include organizational and economic factors of environmental protection [9, 13, 14].

The application of such approaches to energy sector lets to consider and estimate in details the various energy-using activities within each demand sector, charting their volume and physical energy intensities over time [9, 15]. These approaches pay particular attention to maximizing energy efficiency through the use of best available technologies. So, we have solid proof of using only convergence approach for the assessment of energy balances, energy policies and its forecasting.

**Transition to sustainable energy: dynamics and trends.** Renewable energy has become quite topical, and it is gradually being realized that our energy future, if it is to be sustainable, lies in that direction [16].

Figure 3 and 4 show the development of energy consumption over time. How history is cycling?! We have moved from renewable energy (biomass, mostly wood) to fossil fuels (first coal, then oil, then the present move to natural gas), and appear to be moving back to a mix of renewable energy technologies [16].
Fig. 4. Per capita world energy consumption, calculated by dividing world energy consumption by population estimates, based on Angus Maddison data.


Figure 4 demonstrates a small jump about the time of World War I and then a huge jerk of growth between World War II and 1970. There is also a new jump of growth in new millennium as a result of growing coal usage in Asia. Both charts show long-term changes in energy consumption, and together with some observations could be helpful to calculate impacts and spillovers. For example, if we look at the dynamic of CO₂ emissions over the world – there is straight increasing tendency, despite any transfer to new energy resources (fig. 5), so we can assume that the temp of changing energy sources is too slow to impact the environmental pollution. So the future steps should be directed on calculation and modeling appropriate optimum speed of sustainable energy transfer over the world to support sustainable ecological safety.

Fig. 5. World Carbon Dioxide Emissions (1965-2011), million tonnes carbon dioxide

Source: authorial computation on the base of date from BP Statistical Review of World Energy June 2012 (http://www.bp.com/statisticalreview)

Convergence of approaches: models, methods, calculation techniques. The main challenge for forecasting and modeling our energy future is in diversity of energy resources (known already and supposed to be discovered or implemented in technology), so the diversity of models could be in need for the approaching the aim (Fig. 6). However, the diversity does not led to the optimal decision on the level of the world needs. The challenge is in developing one complex converged model equally available for different implementations in any state.

However, ways to achieve the sustainable energy goals are often mutually contradictory. This makes the task of strategic planning of the energy sector complex, which requires finding acceptable compromises. High capital intensity of energy facilities and environmental risks that are inherent, the total inertia of energy, its social importance, coupled with predominantly low energy efficiency of industrial production necessitated the search for the optimal scenario. To determine the best combination of economic and energy sectors special economic and mathematical models are proposed to use [1, 18] (fig. 7).

The feasibility of using economic and mathematical models due to their possibility to determine relationships and dependencies between different elements of the system that otherwise would have remained not identified, determine the impact of external factors on the system, analysis of alternatives development. The complexity of real processes prevents their perfect expression in the model. Such simplification and limitation, possible inaccuracies on certain parameters, on the other hand – any unpredictable events of real life, of course, can reduce the reliability of the model. However, the use of models should rather be viewed not as a search for clear answers for decision-making, but as a way to study the processes that occur in the system. Often the information and experience gained during the construction and operation of the model is much more important than the direct results of model calculations. However, the optimum point is still not found.
Spectrum of economic-mathematical models in energy is quite broad [15, 18-19], and the term energy modeling is quite common:

- models of energy systems detail links within the energy sector, disaggregated range of energy, full set of processing technologies and energy consumption.
- typical energy-economic model considers the complete economy, resulting representation of the energy sector in somewhat simplistic way.
- based on expert values cross price elasticity model calculates the point of market equilibrium factors of production.
- energy-efficient models mainly are used for assess the impact of energy policy on the economy and vice versa.
- in models of energy systems all technologies describe a set of parameters – such as price, operating costs, operational lifetime and payback period, availability, performance, and others. In fact, the technology represents the process of energy product transformation.
- energy linear programming model is used as for the development of the production programs of individual energy complex, as for long-term planning of national power system. The inclusion in models only linear equations guarantees the existence of absolute optimum.
the use of nonlinear models can be achieved by displaying a more complex relationship in a system, however, unlike linear optimization, the absolute optimum exists only under the condition that the objective function and constraints are convex.

- to determine the required capacity of the new energy facility sometimes conduct an analysis of energy during the peak of the system – static optimization model. This type of models examines the state of the system at a particular moment, ignoring changes in system time.

- in quasi-dynamic models the whole time horizon is divided into successive periods, not necessarily equal to each other, the solution of the optimization problem for the first period becomes the initial information for the second time period, and so far for all subsequent periods. In contrast, dynamic models have the function that covers the entire horizon, i.e. the optimization problem immediately works for the whole period. As a result, the initial information for quasi-dynamic model is the current state of the system, while working with a dynamic model requires a clear understanding of the possible future changes of the system.

Identification of this methodological approach (models discussed above) is as a "bottom-up" because the final decision is taken after the model analysis of economic processes at the micro level, in other words – technological changes at the level of final consumers of energy. This approach is used to determine the optimal strategy of providing energy services to national and international levels [18].

All the above models are parametric – they are mainly used for medium and long-term modeling of the energy system, the structure and parameters of which may change over time. Input data for these models is official statistics and expert opinions of the researchers. All these features minimize the uniformity of such models' implementation.

Models of energy systems can be in their turn divided into partial equilibrium models and fixed demand models (fig. 8.)

In preparing short-term forecasts often econometric models are used along with parametric. The basis of this approach is the assumption that existing in the past the trend average correlation has not changed over time. On the basis of statistical time series analysis statistical dependences and trends are established and retrospective adjustment statistics are assessed.

On the other hand, not always every energy model can be strictly categorized, and have the characteristics of different classes of models.

Conclusions. We came in the epoch of the end of technoutopia – we understand that further economic and production development will destroy general system of human being, if we will not develop environmentally benign technologies [20].

Statistic and expert estimations [17] prove that a fully renewable global energy system is possible: we can reach a 95% sustainably sourced energy supply by 2050. To achieve this goal we need to combine all known approaches and use their convergence effects: accelerated renewable energy supply from all possible sources. This requires a paradigm shift towards long-term, integrated strategies and will not be met with small, incremental changes [20]. We have to consider the efficiency and major advantages of renewable energy:

- Little or no pollution or greenhouse gases (i.e. environmental sustainability);
- Available now and forever (i.e. supply sustainability);
- No increasing fuel costs (price stability);
- Low concentrations available worldwide (unlike e.g. present oil concentration in the Middle East, thus improving supply security);
- Potential for development of indigenous energy industry, with associated jobs (since renewable energy needn't be on the scale of fossil energy technology, and thus the exclusive domain of countries with heavy manufacturing capability).

The challenges for this transition to a sustainable energy future include:

- The cost of renewable energy is generally higher than fossil fuels;
- Renewable energy comes in relatively low concentrations;
- A large capital investment required globally to make the transition;
- New infrastructure (e.g. transmission lines) is required;
- Limited time to make the transition (see below);
- Insufficient global energy governance to effectively manage the transition.

Establish an integrated and closed system (indicators) of energy security should be based on the performance of the previous analysis of the processes that occur in the production, supply, distribution and consumption of energy in a country, as well as actual and potential threats to energy security. These threats should be considered in the context of reducing protection of vital interests of the people, businesses, municipalities and regions of the country as a whole at the moment and for the foreseeable future. These indicators can be both quantitative and qualitative characteristics of the definition for each indicator boundary change intervals within which it is believed that threats to energy security is minimal or zero. Only economic-modeling approach have enough tools to mix qualitative and quantitative features of the energy process without any subjective approach. Today we have to consider the developing of a new model or a new mathematical algorithm that provide further application implementation. Thus, sustainable energy development is complex challenge, so only complex decisions and approaches could be possible to implement in the most efficient way.

References

COMPARATIVE ANALYSIS OF THE KEY FACTORS OF GROWTH OF STATE DEBT OF UKRAINE AND EU

Based on research results, economical-statistical model was developed aimed to exhibit the connection between the government debt and major economic factors, namely: gross capital formation, household consumption and credits granted to the residents. After the statistical data of European countries had been examined, the peculiarities of debt formation were elicited in each European Union member. As a result, the relation between the type of economy and factors of debt formation was observed. The study's key findings are as follows:

Keywords: Government debt; government borrowing; capital formation; consumption of the population; lending to the economy.

Introduction

In the world of total globalization the development of the international financial system is notable for a significant increase in external government debt in different countries that by estimations has exceeded 30 trillion dollars [1]. Government borrowing is now an integral part of the financial systems of most countries in the world, as well as an effective institution in the mechanism of macroeconomic regulation and a tool for implementation of an economic strategy of a country. However, the use of debt instruments for the purpose of overcoming nonrecurring deficit and social issues transfers the payment of the debt to a future period without considering the state budget potential. In this context there is a need, on the one hand, to identify factors that lead to the external debt growth in different countries, while on the other hand, to clarify the

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Боргове відновлення в системі управління відновленим життєвим циклом продукції

В. Г. Харламова, канд. економічних наук, доцент

УДК 336.273.3:339.97

Ключові слова: Відновлення, відновлення продукції, управління, економіка.

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scale of impact a debt burden might have on macroeconomic indicators. Moreover, an important area of the external government debt analysis is a study of regularities in the formation of growth trends in the debt burden.

In this study we have set two main objectives. Firstly, to investigate the process of formation of the external government debt in the European countries as well as to carry out a comparative analysis of the main factors causing its growth with the purpose of identifying the specificity of the external debt accumulation in different countries and defining a model of the external government borrowing. Secondly, to describe the key trends in shaping the external government debt in each country and to develop a forecast model of external government debt.

Formation of the parameter circle for modeling external debt

Traditionally, in a study of factors of the external government debt formation the following key macroeconomic indicators are selected: the inflation rate, GDP per capita, export and import rate per capita [2-4]. However, in terms of national accounts system this parameter circle including, namely, the amount of external government debt, GDP per capita, export and import rate, can not be a basis for modeling, since all these parameters are a part of the GDP, and thus, are a priori interconnected, which makes it impossible to use them in a model. Concerning the inflation rate, due to the fact that the amount of external government debt is measured in dollars or euros, which requires appropriate assessment of the rest of the indicators, in terms of national economies, the domestic inflation rates converted into hard currency will be generally taken into account.

That is why according to the results of data mining of a possible parameter circle we have decided to select the following characteristics, which, to our mind, are the main components of a macroeconomic environment:

- the external government debt;
- fixed capital accumulation;
- volumes of the final household consumption;
- volumes of economy crediting (loans granted to financial institutions).

Capital accumulation is an indicator that describes the process of investing funds by economic units into objects of fixed capital to create new revenue in the future and to support the process of expanded reproduction. As long as foreign borrowing is an opportunity to raise additional funds for the economy, we should analyze by contrast how much money in the country is “consumed”, i.e. the volume of the end consumption or expenses of households on goods and services.

We ration this measure to the consumer price index. It is impossible to do without the crediting rate of the economy that defines the amount of loans granted by financial institutions.

To identify the interdependence of external government debt and selected indicators for the period of 2003-2011 their rationing was completed in order to eliminate the impact of inflation (for Ukraine in 2007, for the rest of the world – in 2005). Adjustments were made separately for each indicator. Thus, the external government debt was deflated, capital accumulation and the amount of loans adjusted to the price index for investment, while final household consumption – to the consumer price index.

Within the study external debts in a number of European countries were analyzed. The results of the survey will be presented for Germany, Denmark, Sweden, Finland, the Netherlands, Italy, Greece, Poland and Ukraine. All the calculations were done in the Eviews and Statistica software programs. Several basic models were taken as a foundation: the model of multifactor regression, autoregression, and mixed regression based on the factor scaling.

We found similar patterns in the formation of external government debt in some countries, such as non-random coincidences in the dynamics of external government debt and certain macroeconomic indicators. This pattern is inherent in economies distinguished by sustainable development of the economy. Such countries as Denmark, Sweden, Finland, Netherlands, Germany, and France turned out to be in this group. Let us examine the details of the trends in external debt accumulation and determine the pattern of their formation on an example of Germany.

Development of the external government debt models for countries with different levels and rates of economic growth

Germany. The dynamics of government debt in Germany in the period of 2003-2011 is distinguished by rapid growth and belongs to the wavy type, which is an evidence of seasonal fluctuations (Fig. 1). But it is only at first glance. A deeper analysis of seasonal fluctuations with identification of the trend component has shown that after evaluating the distribution of balance it was found out that it significantly deviates from the normal distribution laws, which is an evidence of presence in the model (that takes into account the seasonal component) of heteroscedasticity. This, in turn, means that the seasonality, actually, does not explain the deviations from the main development trend, characterized by a gradual growth by the 3rd quarter of 2010 and a dramatic leap starting from the 4th quarter of 2010.

![Figure 1. Dynamics of the total government debt of Germany for the period of 2003-2011, in mln EURO.](image-url)
The factor analysis has proved that all the parameters belong to one factor that accounts for 67% of the total variations. After a rotation of the matrix two factors were obtained that have the following factor loading (Table 1).

The volume of debt of the next quarter is determined by the previous one. A check of the balance autocorrelation has given positive results, i.e. autocorrelation was removed already in the first declinations.

For the further modeling of the government debt accumulation process with the AR-process and results of factor scaling taken into account a mixed model of factors was built, which proved to be stable and has given very good results (Table 3).

The debt factor \( F_2 \) is by 90.4% explained by the debt payable in the previous period, as well as by the consumption and accumulation factor \( F_1 \) with the AR-process prevalence. A disadvantage of this model is that without a possibility of interpreting the estimates received, from the point of view of possibilities of modeling it has no practical application. That is why we have attempted to develop a mixed model based on actual data about the external government debt, crediting volumes, as well as volumes of consumption and accumulation with the seasonality factor taken into account (Table 4).

According to the results obtained, the autoregressive mixed model explains 97% of external national debt variation in Germany but the estimates of the model are unstable. All factors turned out to be substantial, except for accumulation. The dominant factors that determine the dynamics of the external government debt proved to be the AR-process and the seasonality of the first order, showing that the formation of the external government debt in Germany in the next quarter is generally due to the accumulated debt of the previous quarter, as well as to seasonal fluctuations.
Despite the instability of the model, taking into account the reliability of the regression coefficients there are grounds for some conclusions:

1. Based on the levels of probability, the order of factors in terms of their importance is as follows: an increase in debt is accompanied, first of all, by an increase in the volume of economy crediting. The second place in terms of importance is occupied by the final household consumption, the third one – by accumulation of fixed capital.

2. An increase in external debt is accompanied by an increase in crediting volumes of the economy, as well as fixed capital accumulation. Thus, an increase in crediting by 1 million euros is accompanied by an increase in the external debt by 2.858 $1 million euros (elasticity coefficient – 0.18, i.e. the debt accumulation process is not elastic regarding the fixed capital accumulation). All this suggests that the use of external borrowings is related to provision of expanded reproduction.

3. An increase of external debt is accompanied by a decrease in consumption, suggesting the use of external borrowings for investment programs realization rather than for final consumption. Thus, a growth in household consumption by 1 million euros is accompanied by a decrease in external debt by 2.6 million euros with the materiality level of 0.0511 (elasticity coefficient – (-0.5)).

Thus, modeling of the external government debt in Germany yielded results that indicate that the growth of the national debt in Germany is mainly connected to the increase in crediting of the economy and accumulation, as well as a decrease in the final consumption. This situation is typical of economies with expanded reproduction, where resumption of production at each new stage is accompanied by growth of both quantitative and qualitative characteristics of the social product, which, in turn, is realized in the economic growth. Such a type of reproduction is inherent in developed market economies. This suggests an exemplary model of the external government debt formation in Germany.

Italy. The dynamics of government debt in Italy in the period of 2003-2011 is characterized by a gradual increase with pronounced seasonal variations, which enables us to draw conclusions about certain cyclicity in government debt application in Italy (Fig. 2).

A deeper analysis of seasonal fluctuations with identification of the trend component has shown that the distribution of balance does not deviate from the laws of normal distribution, and thus, the model of the seasonal component is homoscedastic. However, the seasonal factor is responsible for only 22% of the external debt variation, and thus, it is necessary to evaluate the autocorrelation component of the debt dynamics. Surveys on the presence of autocorrelation in the dynamics line have shown that the duration of decay amounts to 8 quarters, i.e. two years. The results of calculations of the autoregressive model have shown that it is necessary to use the AR-process of the fourth order, explaining 86.5% of the debt formation in the next quarter at the expense of the previous four ones, which is one year.

A check of the balance autocorrelation did not produce necessary results, indicating existence of disturbances in the formation of the external debt of Italy (human factors), and hence, balance autocorrelation was not eliminated neither at the first nor at the eighth difference. This fact must be taken into account when developing models of the external national debt of Italy formation (Table 5).

Table 5. Results of the autoregressive model with respect to the seasonality factor and the MA-process for Italy *

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>2779538</td>
<td>555930</td>
<td>0,500</td>
<td>0,6210</td>
</tr>
<tr>
<td>AR(4)</td>
<td>0,977</td>
<td>0,106</td>
<td>9,215</td>
<td>0,0000</td>
</tr>
<tr>
<td>MA(1)</td>
<td>0,733</td>
<td>0,164</td>
<td>4,464</td>
<td>0,0003</td>
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<tr>
<td>@SEAS(4)</td>
<td>142571</td>
<td>1253756</td>
<td>0,114</td>
<td>0,9103</td>
</tr>
</tbody>
</table>

*) model estimations:
R-squared: 0,923 Akaike info criterion: 23,07
F-statistic: 112,5 Hannan-Quinn criterion: 23,13
Prob(F-statistic): 0,000 Durbin-Watson statistic: 1,65
Source: own calculations based on data of Eurostat.
The autoregressive model with the seasonality factor and the MA-process taken into consideration explains the variation of government debt of Italy by 92.3%. The most substantial factors turned out to be the following: the autocorrelation function that determines its growth throughout the period under study, as well as random fluctuations—disturbances that occur in each quarter. The seasonality factor, although not proved to be significant, but is an essential component of the model.

Table 6. Factor loading after rotation using the Varimax method

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>debt</td>
<td>0.838957*</td>
<td>0.367674</td>
</tr>
<tr>
<td>cap_form</td>
<td>-0.91416*</td>
<td>0.261781</td>
</tr>
<tr>
<td>credits</td>
<td>0.742447*</td>
<td>0.573640</td>
</tr>
<tr>
<td>house_cons</td>
<td>0.009717</td>
<td>0.968581*</td>
</tr>
<tr>
<td>Expl.Var.</td>
<td>2.090864</td>
<td>1.470926</td>
</tr>
<tr>
<td>Ptp.Totl</td>
<td>0.522716</td>
<td>0.367731</td>
</tr>
</tbody>
</table>

*) reliable estimations
Source: own calculations based on data of Eurostat

For further modeling of the process of national debt accumulation with the AR-process of the fourth order, MA-process of the first order, seasonal factors and the results of factor scaling taken into account, a mixed model of factors that explains almost 98% of the variation of the debt of Italy was built, but it turned out unstable, which means the model can be used for getting an understanding of regularities in debt formation. What about the application of its estimates in further calculations, it should be done carefully, taking into account actual circumstances (Table 7).

Table 7. Results of the mixed model of factors for Italy *

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
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<td>904.15</td>
<td>0.0731</td>
<td>0.9423</td>
</tr>
<tr>
<td>@SEAS(4)</td>
<td>27.96</td>
<td>362.32</td>
<td>0.0731</td>
<td>0.9422</td>
</tr>
<tr>
<td>F_2</td>
<td>-0.5967</td>
<td>0.0783</td>
<td>-7.62</td>
<td>0.0000</td>
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<td>AR(4)</td>
<td>0.9968</td>
<td>0.0433</td>
<td>23.00</td>
<td>0.0000</td>
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<td>MA(1)</td>
<td>1.3868</td>
<td>0.2337</td>
<td>5.86</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

*) model estimations:
R-squared 0.9798  
F-statistic 327.85  
Prob(F-statistic) 0.0000  
Source: own calculations based on data of Eurostat

The development of a mixed model based on actual data on external government debt, lending volumes, consumption and accumulation with seasonal factors taken into account, as well as on the MA- and AR-processes (Table 8) has shown that it is stable. All the factors, except for the AR-process, proved to be substantial, while the model itself adequately describes by 92.9% the regularities in the formation of government debt in Italy.

Table 8. Results of the mixed model for Italy *

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
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<tr>
<td>CREDITS</td>
<td>0.0898</td>
<td>0.0341</td>
<td>2.6313</td>
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<tr>
<td>HOUSE_CONS</td>
<td>5.50</td>
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<td>AR(4)</td>
<td>0.1304</td>
<td>0.2106</td>
<td>0.6191</td>
<td>0.5415</td>
</tr>
</tbody>
</table>

*) model estimations:
R-squared 0.929  
F-statistic 54.3  
Prob(F-statistic) 0.000  
Source: own calculations based on data of Eurostat

The dominant factors that determine the dynamics of the external debt turned out to be the MA-process, seasonality of the fourth order, and fixed capital formation showing that the formation of the external government debt of Italy in the next quarter is mainly due to random and seasonal fluctuations, as well as to the fixed capital accumulation. Given the model stability and the high reliability level of the regression coefficients there are grounds for the following findings:

1. Based on the levels of probability, the order of factors in terms of importance is as follows: the increase in debt is accompanied primarily by subjective processes that occur in manually managed economies, which does not allow it to be attributed to the stable economy type. In the
second place is the increase of economy crediting volumes, and in the third – the final household consumption.

2. An increase in foreign debt is accompanied by an increase in the economy crediting, as well as final consumption volumes. Thus, an increase in crediting volumes by 1 million euros is accompanied by an increase in external debt by 0.09 million euros (elasticity coefficient is 0.01, i.e. the processes of debt accumulation and crediting are not adequate) and an increase in the final consumption by 5.5 million euros (elasticity coefficient – 0.74), suggesting the use of foreign loans not for the purpose of accumulation but for consumption purposes, which cannot be considered an evidence of expanded reproduction.

3. The growth of external debt is associated with lower fixed capital accumulation, suggesting that the investment process inhibits the growth of the external debt in Italy, but taking into account that the elasticity coefficient amounts to only (-0.35), accumulation is unable to cover the rapid growth of debt.

Thus, modeling of the external national debt of Italy yielded results that indicate that the increase in the external government debt of the country is mainly connected to the subjective processes, seasonality, growth of final consumption and reduced savings. This situation is typical of unstable economies where there is a high possibility of recession, accompanied by deterioration of not only quantitative but also qualitative characteristics of social manufacture, which, in turn, can lead to a recession. Such a situation in Italy is explained by the country’s inclination to crisis phenomena. Indeed, in recent years Italy often turns to IMF loans to avoid a default and stabilize the economy. While the lack of correlation of macroeconomic indices and government debt volumes is a proof of ineffective and unjustified loans. This type of reproduction is characteristic of market economies with a high level of uncertainty. This enables us to draw a conclusion about the unpredictability of the model of external government debt formation in Italy.

**Poland.** The dynamics of external government debt in Poland was characterized by a gradual increase until the end of 2008. Starting from 2009 the external debt has been rapidly growing over the recent years, accompanied by seasonal fluctuations. This allows us to assume about the existence of certain cyclicality in borrowings of the government of Poland during the period under study (Fig. 3).

A deeper analysis of seasonal fluctuations with identification of the trend component has shown that the allocation of balance virtually does not deviate from the laws of normal distribution, but the seasonal factor does not explain the variation of the external debt. Studies about the presence of autocorrelation in the dynamics have demonstrated that the period of decay lasts 7 quarters, which is almost two years. The results of calculations of the autoregressive model have shown that it is necessary to apply the AR-process of the first order that explains 96% of the debt formation of the next quarter with respect to the previous one. A check of the balance for autocorrelation has shown its absence in the process of Poland's foreign debt formation.

![Figure. 3. Dynamics of total government debt in Poland for the period of 2003-2011, mln EURO](image)

The autoregressive model with the seasonality factor and MA-process taken into account explains the variation of the national debt in Poland by 97.1% (Table 9). The most significant factors turned out to be the following: the first-order autocorrelation function that determines its growth throughout the whole period under study, as well as random fluctuations – disturbances that occur every 5 quarters. The seasonality factor, although it did not prove to be significant, but given the results of the previous analysis, is an important factor that determines the amount payable in each quarter.

**Table 9. Results of the autoregressive model with seasonality factor and MA-process taken into account for Poland**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
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<td>65973</td>
<td>2.704</td>
<td>0.011</td>
</tr>
<tr>
<td>AR(1)</td>
<td>0.962</td>
<td>0.048</td>
<td>20.19</td>
<td>0.000</td>
</tr>
<tr>
<td>MA(5)</td>
<td>0.881</td>
<td>0.044</td>
<td>20.22</td>
<td>0.000</td>
</tr>
<tr>
<td>@SEAS(4)</td>
<td>479</td>
<td>656</td>
<td>0.731</td>
<td>0.470</td>
</tr>
</tbody>
</table>

*) model estimations:

R-squared 0.971 Akaike info criterion 19.60
F-statistic 344 Hannan-Quinn criterion 19.66
Prob(F-statistic) 0.000 Durbin-Watson statistic 1.50

Source: own calculations based on data of Eurostat
The development of a mixed model based on actual data on the external government debt, consumption and accumulation volumes with seasonality, as well as the MA- and AR-processes taken into consideration (Table 10) has shown that it is stable and contains only reliable estimates. All factors turned out to be significant, while the level of adequacy of the model comprises 96.2%.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-46905</td>
<td>45861</td>
<td>-1.023</td>
<td>0.3149</td>
</tr>
<tr>
<td>MA(2)</td>
<td>0.898</td>
<td>0.052</td>
<td>17.209</td>
<td>0.0000</td>
</tr>
<tr>
<td>AR(1)</td>
<td>0.772</td>
<td>0.148</td>
<td>5.223</td>
<td>0.0000</td>
</tr>
<tr>
<td>HOUSE_CONS</td>
<td>4.090</td>
<td>0.936</td>
<td>4.369</td>
<td>0.0001</td>
</tr>
<tr>
<td>@SEAS(4)</td>
<td>-3504</td>
<td>1625</td>
<td>-2.156</td>
<td>0.0395</td>
</tr>
<tr>
<td>CAP_FORM</td>
<td>0.771</td>
<td>0.259</td>
<td>2.977</td>
<td>0.0058</td>
</tr>
</tbody>
</table>

*) model estimations:
R-squared 0.9620  Akaike info criterion 19.98
F-statistic 147  Hannan-Quinn criterion 20.07
Prob(F-statistic) 0.0000  Durbin-Watson statistic 1.88
Source: own calculations based on data of Eurostat

The dominant factors that determine the dynamics of the external government debt in Poland turned out to be the AR-process of the first order and MA-process of the second order, as well as consumption, showing that the formation of the external government debt in Poland in the next quarter, is mainly due to the already accumulated debt and random fluctuations, as well as the final household consumption. Taking into account the model stability and the high reliability level of the regression coefficients there are grounds for certain conclusions:

1. Based on the levels of probability, the order of factors in terms of importance is as follows: an increase in debt is accompanied primarily by subjective processes that occur in manually managed economies, which does not allow to attribute it to the stable economy type. In the second place there is the accumulated debt and in the third – the final household consumption.

2. The growth of external debt is accompanied by growth in final consumption and accumulation. Thus, the growth of final consumption volumes by 1 million euros is accompanied by an increase of external debt by 4.09 million euros (elasticity coefficient – 1.33, i.e. the process of debt accumulation is elastic in relation to the increase of final consumption), an increase in fixed capital accumulation by 1 million euros corresponds to the growth of debt by 0.771 million euros (elasticity coefficient – 0.08.) All these facts indicate the allocation of foreign borrowings mainly on consumption rather than on expanded reproduction, which is an example of an unstable economy, the development of which is entirely dependent on foreign investments.

Thus, according to the results of Poland’s external government debt modeling, certain conclusions were made, suggesting that the level of external government debt of the country and its growth are mainly due to subjective processes, accumulated debt, significant increase in final consumption and a slight increase in accumulation. This situation is typical for an unstable economy, the welfare of which depends on the amount of external funding. Such economies are susceptible to external factors, i.e. to the macroeconomic situation in the world, a deterioration of which will be accompanied by reduced rates of economic growth, which eventually will lead to a recession. This allows us to assume the subjectivity of the model of external government debt formation in Poland.

Greece. Another country with unstable economy is Greece. The dynamics of the government debt of Greece for the period of 2003-2011 is defined by constant growth (Fig. 4). An analysis of existence of seasonal fluctuations with identification of the trend component has revealed that the seasonal factor does not explain the variation of the external debt. Surveys on occurrence of autocorrelation in dynamics have shown that the period of decay amounts to 8 quarters, it means two years, which is the same as in Italy. The results of calculations of the autoregressive model showed that it is necessary to apply the AR-process of the first order that explains almost 98% of the formation of debt in the next quarter due to the previous one.

Figure 4. Dynamics of the total government debt of Greece for the period of 2003-2011, mln EURO
Source: own calculations based on data of Eurostat
A check for balance autocorrelation did not produce necessary results, indicating the existence of disturbances in the external debt formation of Greece (subjective factors), and hence, balance autocorrelation was not eliminated – neither on the first, nor on the eighth differences. The autoregressive model based on the MA-process explained the variance in national debt of Greece by 98%. The most significant turned out to be: the autocorrelation function that determines its growth throughout the whole period, as well as random fluctuations – disturbances that occur in each quarter. Seasonality factors are not significant, and therefore, will not be taken into account in further modeling.

The factor analysis has shown presence of two factors that generally explain 94% of variation. Thus, the government debt and loans account for 63.5% of variation and 30.5% of it is explained by the second factor that includes accumulation and final consumption.

For the further modeling of the government debt accumulation process with the AR-process, first-order MA-process and the results of factor scaling taken into account, a mixed model of factors was built that explains almost 96% of the government debt variation of Greece, but the second factor did not prove to be significant. Thus, the factor of debts and loans (F_1) is mainly explained by debts in the previous year and by disturbances that occur in each quarter.

Development of a mixed model based on actual data about the external government debt, lending volumes, consumption and accumulation with the MA- and AR-processes taken into account (Table 11) has shown that it is stable. All the factors, except for consumption and accumulation, proved to be significant, while the model itself adequately describes the regularities of the government debt formation in Greece by 99%.

The dominant factors that determine the dynamics of the external government debt turned out to be the AR-process of the first order, the MA-process of the eighth order and fixed capital accumulation, proving that the formation of the external government debt of Greece is mainly due to the amount of accumulated debt, random fluctuations, as well as fixed capital accumulation. Taking into account the model stability and the high reliability level of the regression coefficients there are grounds for the following conclusions:

1. Based on the levels of probability, the order of factors in terms of their importance is as follows: an increase in debt is accompanied first of all by the gross debt burden and subjective processes that occur in a manually managed economy, and characterize the instability of the economic system. In the second place is a decline in accumulation volumes.

2. The growth of external debt is accompanied by a reduction in crediting of the economy, final consumption and accumulation. Thus, the elasticity of debt against accumulation, consumption and lending is inelastic, which, given the low value of the regression coefficients, suggests the use of foreign loans to pay off the previous ones, which is evidenced by disturbances of the eighth order. Moreover, an increase in external debt is accompanied by a reduction in consumption, crediting and accumulation.

Thus, modeling of the external government debt of Greece made it possible to obtain results that indicate that an increase in external debt of the country is mainly connected to the subjective processes and accumulated debt of the previous years. This situation is typical for economies that undergo a deep financial crisis, which, in turn, may lead to a default. There is no coordination between the external debt and macroeconomic indicators in the country. By analogy with Italy, latent factors are characteristic of the formation of the external government debt of Greece. All this is an evidence of lack of a government external borrowing formation strategy, and as a result there are high interest rates and inefficient loans.

For general, the developed model of the national debt in Greece describes the subjectivity of the external debt formation process, as well as contradictions in the basic economic laws operation, leading to imbalances in the economic system of the country. Continuous involvement of IMF loans for overcoming crisis phenomena has only exacerbated the problem and led to a further rise of prices, which has reduced the competitiveness of the Greek economy, increased the debt burden of the country and brought Greece into the ranks of outsider countries in Europe.

Ukraine. Ukraine can also be attributed to the countries with an unbalanced economy. The period of 2008-2011 is characterized by soaring debt and is similar to Poland in its form (Fig. 5). An analysis of the presence of seasonal fluctuations with identification of the trend component has shown that seasonal factor does not explain the variation of the external debt. Studies on presence of autocorrelation in the dynamics line have shown that the period of decay comprises 7 quarters, which is exactly the same as in Poland. The results of calculations of the autoregressive model have shown that the inclusion of the AR-process is not enough: it does not eliminate the autocorrelation, which indicates presence of latent factors in the process of Ukraine’s foreign debt formation.

The autoregressive model based on the seventh order MA-process and seasonal factors has explained the variance of the national debt of Ukraine by 97.5%. Factor analysis has revealed the presence of two factors that generally explain 91% of the variation. Thus, 53% is due to the first factor that includes accumulation and final consumption.

For the further modeling of the government debt accumulation process with the AR process, MA process of the seventh order and the results of factor scaling taken into account, a mixed model of factors was built that has ex-
explained 94% of variation of the external debt of Ukraine. Thus, the debt \( F_2 \) is explained by debts of the previous period, disturbances that took place over these two years, seasonality and growth of accumulation and consumption.

![Figure 5. Dynamics of the total government debt of Ukraine for the period of 2003-2011, in mln USD](source: own calculations based on data of Eurostat)

The dominant factors that determine the dynamics of the external government debt proved to be the MA process of the fourth order, the AR-process of the first order and of the sixth order, showing that the formation of the external government debt of Ukraine is mainly due to the amount of previously accumulated debt, as well as annual random fluctuations. Given the high level of reliability of the regression coefficients, there are grounds for the following conclusions:

1. Based on the levels of probability, the order of factors in terms of importance is as follows: an increase in debt is accompanied primarily by the subjective processes and gross debt burden with a review in a year and a half that occur in a manually managed economy, and characterize the uncertainty of the economic system.

2. The growth of external debt is accompanied by the growth of final consumption and reduced accumulation, indicating the use of borrowings for end needs. Thus, debt with regards to accumulation turned out to be inelastic (-0.43): this indicates the use of external loans for repayment of previous debts, which is substantiated by fourth-order disturbances. However, the final household consumption that tends to increase with the debt turned out to be elastic regarding the external debt.

Conclusions:

Thus, modeling of the external government debt of Ukraine yielded results that indicate that the increase in external debt of the country is mainly due to the subjective processes and debts accumulated in previous years, which is accompanied by simultaneous stimulation of final consumption and narrowed reproduction. The situation that takes place in present-day Ukraine is, on the one hand, similar to that of Greece, and on the other hand, involves processes that exacerbate negative trends that can lead to an instant (unpredictable) default. In fact, the economy of Ukraine at the moment is "on the hook of IMF" and survives only due to the "snowball" of borrowings. The situation is aggravated also by the lack of expanded reproduction, decay of the real sector of the economy and use of borrowings not on investment but on consumption. Ukraine lacks any coordination between the external debt and macroeconomic indicators. By analogy with Italy and Greece, latent factors are inherent in forming the external government debt of Ukraine. This situation is typical of countries that are potentially vulnerable and are prone to an unpredictable crisis that can start any moment.

Thus, according to the results of the study, three types of models of the external debt formation were designed, namely:
• the autoregressive model based on seasonality and disturbances of different order that makes it possible to study separately the dynamics of the external government debt formation, on the basis of decomposition of the dynamics line;
• the mixed autoregressive model that includes seasonality of the MA process and results of factor scaling, based on which it is possible to study the regularities of formation of the factor of debt loading taking into account not only its decomposition, but also including the factor of accumulation, crediting and consumption;
• the mixed autoregressive model based on the actual data about the external national debt, consumption and accumulation with MA-, AR-processes as well as seasonality taken into account, which allows to determine the dominant factors that contribute to the growth of the debt burden.

Within the survey, based on a study of regularities of the dynamics of the external debt of European countries specificity of the external debt formation was revealed, which allowed us to establish a typology of economies of European countries regarding the factors that determine the amount and dynamics of external debt, namely:
• stable economies – Germany, France, Denmark, Sweden, Finland, the Netherlands;
• unpredictable economies – Italy;
• sensitive, unstable economies – Greece, Poland;
• Economies of instant default – Ukraine.

References

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which have environmentally-friendly economic activities. Along with the changes in the legislation there is a necessity to develop new approaches to accounting and taxation related to the activities of national enterprises in the field of environmental management.

The next scientists made a significant contribution into research of accounting and taxation problems of the enterprises activity: V.D. Bzyljevych, Z.S. Vamalyi, O.D. Vasylyk, S.F. Holov, N.O. Hura, I.U.A. Kuz'mins'kii, H.I. Kupalova, L.H. Lovins'ka, I.O. Litiy, V.M. Mel'nyk, A.M. Podderiohin, O.S. Red'kin, V.H. Shvets' and others. They focused on the methodology and organization of the accounting at the enterprises, legal regulation of calculation and payment specific types of taxes and charges and control of legality of such actions while doing the tax audit. However, there are still open issues regarding reforming Ukrainian legislation towards environmental accounting and taxation activities of the enterprises in accordance with EU requirements, which need to be researched and improved.

Modern tendencies of harmonization of accounting in European countries and moving to International Financial Reporting Standards cause necessity of bringing new accounting approaches in the field of environmental entrepreneurship to improve the quality and reliability of financial statements of enterprises. In addition, the foundations of reflecting and calculation of underlying taxes, which are paid by business entities as well as environmental enterprises, were changed with adoption of the Tax Code of Ukraine of 12.02.2010, Nr 2756-VI. The contribution of the Code promoted reviewing accounting system organization in the field of environmental entrepreneurship, accounting treatment of the income tax and requirement of tax and accounting harmonization at national enterprises. However, there is still discrepancy of accepting some types of income and expenses in accordance with the tax legislation and accounting standards. Therefore, it is necessary to create an optimal system of accounting liabilities for taxes and charges which could reflect tax revenues and expenses of the accounting and at the same time could be effective in terms of simplicity and understandability of accounting approaches. Therefore these issues need further researches and improvements.

Object of the article is to improve accounting and taxation methodology at environmental entrepreneurship to increase investment prospects and competitive performance of green business enterprises in Ukraine. The next targets were defined to achieve the goal:

- Case study and prospects for development of environmental entrepreneurship in Ukraine and other countries;
- Identifying gaps in current legislation regarding accounting and taxation at environmental enterprises;
- Identifying and justifying ways of improving methods of accounting and taxation at green business enterprises in Ukraine.

World economic volatile situation encouraged development of the innovative green technologies, first of all, energy in developed countries. Green technologies are treated as the tool for the provision of energy independence of countries, development of modern infrastructure, reduction of ecosystems degradation. One of the problems in the introduction of ecologically safety technologies is introduction costs at enterprises. They cost much more expensive, than technologies based on custom fossil fuel. Cost reduction is possible only by means of researches acceleration, elaborations in green business and introduction of innovative technologies, thereby they will become more profitable and attractive for their utilization by enterprises.

International legislation of all developed countries stipulates widening of investment in development and exploration of green technologies. Thus European strategic program in energy technologies provides quick development of key energy technologies on the European level, which must ensure the implementation of strategic aims until 2020: reduction of primary energy consumption by 20%, increase by 20% of renewable energy sources share in the energy balance of EU and reduction by 20% of greenhouse gas emissions [2].

European industrial initiatives in wind energy, bio-energy, smart grids, solar energy, capture and preservation of carbon, stable nuclear power, provides investments in research and development of green technologies in amount of above 47 bin EUR until 2020 [3].

Introduction of new principles and separate components of sustainable development policy in Ukraine are stipulated by a set of legislative acts and national documents. Mainly they deal with implementation of energy efficiency and environmental policy. The program of economic reforms of Ukraine for 2010-2014 "Prosperous society, competitive economy, effective state" describes the role and importance of energy efficiency increase of the basic economy sectors, improvement of energy and housing and public utilities sector. Besides, a Strategy of the state environmental policy is developed in Ukraine. In order to improve environmental situation and increase in environmental safety optimization of the energy sector, implementation of the integrated management of water resources, preparation and introduction of means in conservation of climate in conditions of global warming.

However national policy must ensure not only conditions for the green business functioning, investments attraction in this field, but also implementation of the corresponding industrial policy. Ukraine belongs to energy shortage countries. High energy volume is the result of negative branch structure of the national economy, caused by using of out-of-date technologies in major economy branches and existing of problems in attracting of investments and receipt of credits for the events financing as to the green business principles implementation. Besides, technologies used in the energy, industry, on transport and housing and utility, are not only energy cost-based but also cause significant harm to the environment, contaminating the air, water and soil. That is why assistance in transition of the Ukrainian industry to the principles of resource effective and clean production would become the main priorities of the environmental policy in the short term.

Under such conditions, an important thing is to create favorable conditions for entrepreneurship activities in the field of environmental business. This can be possible by simplifying accounting records-keeping and financial reporting, granting tax exemptions and tax exemption for the production of environmentally friendly products, providing environmental services, implementation measures to preserve natural resources and protect the environment from pollution as a result of business entities performing.

Environmental accounting and environmental taxation is developing and implementing actively in Ukraine and in the world. The following organizations are working on issues of developing accounting and taxation methods of the enterprises in the field of environmental management: World Bank, United Nations Organizations, International Accounting Standards Board, and others. Significant importance in promotion wide application of green accounting principles, financial reporting and taxation belongs to professional accounting associations: International Federation of Accountants (IFAC), Association of Chartered Certified Accountants (ACCA), Chartered Institute of Management Accountants (CIMA) and others.

International Financial Reporting Standards has an important place in accounting system in many countries in the
world. These accounting standards are used more than in 115 countries worldwide, according to the research results of the International Accounting Standards Board [4]. Standardization of accounting approaches will allow simplifying accounting processes at the enterprises, particularly with foreign funds and enable financial reporting according to unified requirements. It is necessary to improve accounting of taxes and charges liabilities on the basis of harmonization of national and international standards of accounting and financial reporting under such conditions.

Analysis of word accounting policy formation indicates that the process of accounting and financial reporting harmonization in different countries started in early 70’s and continues till nowadays. Following organizational and methodological stages of the process were identified by us as a result of done retrospective analysis of methodological basis for the problems of accounting standards optimization: preliminary, methodic, executive and final (table 1).

<table>
<thead>
<tr>
<th>Stage</th>
<th>Name</th>
<th>Main Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005 – nowadays</td>
<td>Final</td>
<td>Since 2005 – using international standards by companies which equities listed on the stock exchange and other enterprises, including taxes and charges liabilities accounting.</td>
</tr>
</tbody>
</table>

* Source: done by the author on the basis of [5, p. 151-153, 6, p. 9, 204].

The first stage (70th – early 90t) is characterized by adopting the four main directives which became fundamental formation of accounting and reporting of unified principles in Europe. There was definition of standard requirements for making annual financial reporting by European companies at the stage and presenting consolidated statements by banks and financial institutions. As a result, appropriate changes were introduced into European countries legislation regarding accounting and taxation of enterprises activities.

At the second stage (late 90th – early 2000), accounting standardization was realized by adopting International Financial Reporting Standards, which became basis of accounting system harmonization in different countries. It has also been adopted a harmonization strategy of national and international accounting systems of European countries and was made a proposal to use International Financial Reporting Standards as the main system for companies standards which are presented on international capital market regarding accounting of tax calculation and other operations.

The executive stage (2001 – 2004) is specified by implementation strict control system over compliance with international standards requirements. As a result, two level control system and technical expertise was created and was approved by International Financial Reporting Standards. Since that time legislative regulation was performed by Committee on accounting regulation and technical support – by European advisory group on financial reporting. On top of that, the process of implementing the international standards and European principles of enterprises activities taxation started just at the stage.

At the fourth stage (2005 – till nowadays) started graduation from harmonization to convergence of international standards which enable creating unified accounting requirements for all global companies. International standards are used more than in 115 world countries nowadays. The process of convergence of International Financial Reporting Standards and General Accepted Accounting Principles – US started just at the final stage.

Thus, global tendencies of accounting system unification enabled implementation of International Financial Reporting Standards on national level in European Union countries and other countries. Another important document which regulates companies’ activities on international market is US Generally Accepted Accounting Principles. Therefore, import place is given to convergence of two major accounting systems under current conditions of globalization in the world.

Harmonization of accounting in Ukraine and the world is also performing using international standards. The first step towards harmonization of national and international accounting was done in 1998 when the Accounting reform program using international standards was adopted. As a result of its implementation, Act of Ukraine "On accounting and financial reporting in Ukraine" and accounting standards was adopted and defined basic methodological principles of accounting and financial reporting by national enterprises including milk processing plants. Strategy of using International Financial Reporting Standard was adopted in 2007 in Ukraine and it defined further ways of improving methods and accounting organization, including taxes and charges liabilities according to international legislation requirements. Decision about mandatory usage of International Financial Reporting Standards by public joint-stock companies, banks, insurance companies was taken on January 2012.

In spite of existing advantages of implementation International Financial Reporting Standards, some scientists have different point of view as for harmonization problems of national and international practice of accounting and taxation. Thus, S.F. Holov considers that full harmonization of accounting and reporting has a number of disadvantages that complicate the accounting process and slow
down accounting science developing. The scientist mentions that the main problem as adoption of unities types of reporting leads to precedence of the form over the body which is unacceptable in accounting science [7, p. 3-7].

Besides, a number of national programs have been implemented in Ukraine and an important place is given to realization of environmental policy, environmentally responsible business, developing and implementation of new approaches in accounting and taxation, creation information support of environmental activity enterprises. This is a Program of economic reforms in 2010-2014, National environmental action plan of Ukraine in 2011-2015, national, national specific ecological programs and others. Current tendencies of environmental enterprises developing require simplifying of accounting and tax burden decreasing at green business enterprises.

National Generally Accepted Accounting Principles (Standards) define conceptual framework of taxes and charges liabilities as a component of joint liabilities at green business enterprises. These are Accounting Principles 11 "Liabilities", Accounting Principles 17 "Income Tax" and a standard which regulates representation process of tax liabilities in financial statements – Accounting Principles 1 "General requirements for financial statements". Separate accounting principles were not set for accounting of some taxes and charges, except income tax, due to similar methodological approaches to calculation and obligatory payment to the budget not only at environmental business but other types of enterprises.

Accounting Principles 11 "Liabilities" define basic approaches to recognition and repayment of obligations of taxes and charges as well as evaluation of its different types of accounting and reporting. There are two types of liabilities of evaluation according to the principles – maturity value and current value which should apply depending on the form of indebtedness. Maturity value rate applies to current liabilities for taxes and charges i.e. not discounted funds amount which should be paid at the time of repayment of obligations. Unlike current liabilities, in long-term indebtedness estimating, the present value should be considered, i.e. discounted funds amount which is used for existing repayment of enterprise obligations.

The evaluation only applies to interest bearing of long terms liabilities as an important requirement of the principle. However, the principle doesn't specify which evaluation at enterprise should apply to other long terms liabilities, including deferred tax liabilities. Therefore we propose to add paragraph 11, of Accounting Principles 11, at the part of evaluation of other debt, as follows "Long term liabilities where interest not accrued, carried at maturity value balance". The definition is important for proper presentation of deferred tax liabilities on accounts and financial statements as it corresponds to accounting and economical body of the debt upfront the budget and enforces precedence principle of the body over the form.

Accounting income tax is regulated by Accounting Principles 17 "Income Tax". Separation of certain accounting principle is due to the fact that principles of assessment and evaluation of the taxes are totally different from accounting treatment of other tax liabilities types. The principle considers requirements for recognition and evaluation of the specific objects as deferred tax assets and deferred tax liabilities. It is calculated based on current tax rates. However under conditions of inflation escalation, this approach is not appropriate since it is leading to decreasing the tax liability amount at the time. An approach which is used at international practice defines demand to adjust financial reporting indexes based on inflation rate. This approach is correct, once it allows reliable estimation of long-term liabilities for taxes and charges at specified date. It should be carried out regarding long terms tax liabilities, since existing inflation in the country leads to serious understatement of its assessment.

Thus, assessment of deferred tax liabilities should be carried out by adjusting and applying general price index. Difference in taxes appears while indexing other financial reporting items and it brings into existence of deferred tax assets and deferred tax liabilities at green business enterprises. It is important to make such recalculation of deferred tax assets and deferred tax liabilities especially for those that may occur at one reporting period and maturity – during other periods.

We propose to consider inflation rate only to long term debt taxes to simplify accounting process at national enterprises in the field of environmental business. Evaluation of current taxes and charges liabilities should be carried out according to maturity value. This is because of enterprises taxes and charges are dynamic. Current conditions of economic management demand prompt payment of taxes acruals and charges to state and local budgets of Ukraine. Besides existing of penalties and fines under the tax legislation makes the process faster. In this case adjustment in compliance with general price index will have immaterial effect on taxes and charges liabilities and will complicate accounting management at national enterprises of green business. We therefore propose weighting on general price index only deferred tax liabilities.

Besides, while evaluating liabilities for taxes and charges, existing penalties and fines of enterprise should be considered. The amount of tax payable should include only the amount of penalties and fines which appeared at enterprise as a result of nonfulfillment of obligation upfront State tax administration. This amount is included into the accrued expenditures and it should be repaid during the accounting period and transferred in one payment equal to total liabilities of taxes and charges. Costs incurred by applying penalties and fines to enterprises should be stated in other operating expenses, as liabilities for taxes and charges recognize as a result of running main activities by national enterprises.

Green business enterprises activities should be implemented through harmonization of national legislation, including Accounting Principles and requirements of International Financial Reporting Standards for improving accounting of taxation. International experience should be applied not by total implementation of accounting principles but in terms of effectiveness and practicality of the process, during harmonization of accounting and reporting. Therefore, it is necessary to unify methodical approaches to accounting and reporting as for taxes and charges liabilities but not to implement totally unify methods, primary documents forms, accounting records and reporting. Besides, proposals to international standards should be included according to national experience of accounting.

Another document – Accounting Principles 17 and International Financial Reporting Standards 12 is set for accounting of income tax according to national and international accounting standards. This is due to special methodological approach for presenting income tax in accounting and reporting of enterprises which is different from the requirements that present accounting of other taxes and charges liabilities. That is why it is necessary to consider basic methodological principles of income tax accounting and compare requirements to its recording in accordance with national Accounting Principles and International Financial Reporting Standards and International Accounting Standards.

Results of analysis of Accounting Principles 17 and International Financial Reporting Standards 12 show that
there are no significant differences in their conceptual positions. The same approaches are set in definition of objectives of accounting standards, main categories, types of tax liabilities and temporary differences, recognition, evaluation of income tax and other provisions. However, unlike the national standards, international ones are focused on matter of principal of tax income accounting which has deeper understanding of main aspects.

National and international standards also harmonized in issues of dividing temporary differences. Temporary differences are divided into those that are liable to taxation and not liable. Meanwhile, unlike the International accounting practice, Accounting Principles 12 doesn't contain criteria for identification of temporary differences that complicates process or recognition and recording and as a result of presenting inadequate information in financial statements of enterprises. Besides, enterprises may have cancelled differences, so we offer to adjust existing tax differences classification by separation cancelled differences along with permanent and temporary.

Generally Accepted Accounting Principles "Tax differences" are divided according to tax differences into the next types: tax differences on revenue from production sales, other operating income, other income, cost of goods sold, other operating expenses, other expenses, extra income and extra expenses. We consider that this classification complicates representation of tax calculation on accounts and reports of enterprise. That's why we suggest to make amendments into accounting provisions and to join items of operating income into separate groups (product sales income and other operating income) and items of operating expenses (cost of goods sold and other operating expenses). This will allow making operating time shorter for accounting staff on inserting information about calculation of tax differences and calculation of the amount.

A positive feature of national accounting system is specification of types of liabilities or assets, where current income tax determinates. This is very important because increasing or decreasing of tax amount involves changes only in current liabilities and receivables, thus reduces possibility of making mistakes when exterminating income tax. Attention should be paid also to correct determination of income tax and deferred taxes, estimation of income or income tax expenses.

Accounting Principles 17 and International Financial Reporting Standards 12 among many common features have some differences. First of all, it is about estimation procedure of deferred tax assets and liabilities. Thus, Accounting Principles 17 determines that effective tax rate applies only for taxation of enterprises' profit meaning that discounting of deferred tax is not provided. According to International Financial Reporting Standards 12 deferred tax assets and deferred tax liabilities are evaluated according to current and announced tax rates. In this case tax consequences of existing temporary differences are treated as tax payments which company should pay to the budget after all or which will be refunded in the future periods. Therefore, the amount of deferred taxes is calculated on the basis of tax rates that will apply for repayment liabilities for income tax and enterprise will have temporary difference under these conditions. Comparing these approaches, difference in amounts of deferred taxes at the end of the reporting period was detected and it breaks data comparability of financial reporting at national and international enterprises.

It is necessary to mention that national and international standards have lack of definition of permanent differences. Definition of permanent differences is given only in Generally Accepted Accounting Principles "Tax differences" but it doesn’t allow characterizing in full of its accounting body. This leads to false assignment of its components to deferred tax assets or liabilities. It is necessary to add the paragraph "General provisions" Accounting Principles 17 "Income tax" and "taxes and accounting" "Tax differences" to avoid these cases happen by the following author's interpretation: permanent differences – difference between profit amount or negative profit, calculated on the basis of financial reporting, and the amount of profit or negative profit is defined by tax legislation that occurs in current reporting period and continue existing in the future. Thus, determination of costs or revenue of income tax should be done by following strictly the next stages:

- Definition of balance sheet assets on the date of balance;
- Definition of balance value liabilities on the date of balance;
- Definition of income and expenses according to accounting results;
- Enterprise income tax assessment;
- Calculation of deferred tax assets (DTA);
- Deducting of deferred tax liabilities (DTL);
- Capability assessment of closing up DTA and DTL;
- Identifying changes to DTA and DTL at the previous stages;
- Calculation of sum expenses or revenue of income tax;
- Expenses or revenue of income tax = Current income tax + DTL – DTA.

Thus, expenses or revenue of income tax are formed by means of current income tax and including deferred tax liabilities and deferred tax assets. It is important that permanent tax differences are not a part of deferred tax assets and liabilities, that's why it is not shown on bookkeeping accounts.

It is necessary to distinguish two types of temporary differences besides permanent differences – those which are taxable and those which are deductible. The division is important because it allows identifying correctly deferred tax assets and deferred tax liabilities and calculates expenses (revenue) from income tax. It is provided by Generally Accepted Accounting Principles "Tax differences" distinguishing of tax differences depending on type of activity: tax differences on revenue from goods sales, other operating revenues, other costs, cost of goods sold, other operating expenses, as for other expenses, extra revenue, as for extra expenses.

Requirements for presentation of income tax in the financial statements which are putting towards national and international enterprises are the same. According to national principles, such as Accounting Principles 17, current and deferred income taxes are recognized as expenses or revenue in financial results report (statement of comprehensive income). Income tax expenses from ordinary activity presented in the line "Tax on profit from ordinary activities" in financial results report (in brackets), revenue of tax income determined in the line "Revenue on tax on profit from ordinary activities". When determining financial result from ordinary activities, negative profit from such activity before taxation is reduced by the tax amount.

receivables and liabilities on current income tax represented in balance sheet as a part of current assets and current liabilities. Besides, according to provisions of Accounting Principles 17, it is allowed to close it up if liabilities of income tax are repayable by accounts receivables. Information about deferred tax assets and liabilities come out in balance as a part of noncurrent assets and long term liabilities. Meanwhile, Accounting Principles 17 allows closing up such articles when income liabilities are controlled by the same tax administration.

Detailed analysis of national and international principles of accounting of taxes and charges calculation indi-
cates on its harmonization as to its recognition, and evaluation of certain types and taxes and charges and reclassification of liabilities and tax differences in financial reporting. Principal directions of harmonization of financial accounting and reporting of tax liabilities upfront the budget are shown on Figure 1.

Figure 1. Principle directions of harmonization of accounting and reporting liabilities for taxes and charges in Ukraine according to IFRS *

*Source: created by the author.

Thus, main aspects of harmonization of national and international principles include recognition, evaluation and classification of liabilities for taxes and charges. If tax debts are not paid, it should be recognized as deferred and presented at the balance sheet (Statement of financial standing, p. № 1) by a separate item. When evaluating certain types and charges, it should be guided by approaches stated in international standards of accounting and financial reporting. It is subject to following the rule of "first event" when presenting value added tax as well as application of method of comparing income and expenses during calculating of the income tax. Reclassification of liabilities and tax differences according to international principles increases information value and intelligibility of financial reporting. However, this approach may change calculation methods of financial indicators and make difficult carrying out of financial stability analysis. That's why approaches for carrying out analytical procedures at national enterprises should be revised.

It is worth to stick to the next principles when harmonization of national and international accounting systems: accountability, comparability, objectivity, intelligibility, efficiency. Thus, the principle of accountability consists of presenting in accounting and financial reporting of open and clear information of economic activities at national enterprises. The information is given in compliance with the requirements of current laws and regulations.

The principle of comparability should ensure unification of accounting records and reporting of enterprises from different countries. Harmonization of certain items of financial and tax reporting will provide comparability of information on financial status and financial solvency of enterprises and efficiency of using reserves and alternative repayment of taxes and charges liabilities of entity's business activities.

Objectivity means that interests of users of financial reporting should not affect on presenting accounting and reporting information, including shareholders, other business partners and tax authorities. The principle of objectivity provides presenting truthful and unbiased information in accounting and reporting, as for related occurrence and repayment of taxes and charges liabilities. This will ensure equal rights and duties of entities of calculation relations and performing liabilities upfront the budget in a timely manner.

Accounting information should have information intelligible by external users. This applies particularly to nonresident stockholders, creditors, finance institutions and other business partners. This ensures the principle of intelligibility of financial reporting for its external and internal users. It means presenting accountable and intelligible information in financial reporting, faithful representation of financial reporting of companies around the world.

Efficiency means providing appropriate conditions for harmonization of accounting principles in Ukraine and worldwide. This principle is realized by simplifying and improving accounting and reporting of taxes and charges calculations at national enterprises. This is due to solving accounting problems of legal, methodological and organizing and practical nature.

Important factor of stable economic growth in Ukraine is keeping stability and assisting effective operation of national enterprises by implementation effective socioeconomic, financial and tax policy at state level and certain enterprises. The process is complicated because of the next problems: differences of provisions of tax legislation and methodological approaches to taxation of business operations in different countries which effect increasing of tax burden on companies, operating at international markets. However, existing of a large amount of ununified legislative regulatory acts complicates accounting at national enterprises. There is an urgent need of harmonization of accounting in Ukraine according to requirements of international principles.

A number of measures have been implemented to promote developing of environmental entrepreneurship in Ukraine with adopting of the Tax Code of Ukraine in 2010. Especially, import of vehicles and equipment which are
used in the process of modernization of biofuel production enterprises, temporary exempts from VAT until the 1st of January, 2019 [8]. Besides, requirement for collecting environmental tax increased and it helped to reduce emission of pollutants into the atmosphere, waste interception into water sources, observing rules of waste utilization by enterprises – the largest polluters of the environmental.

Despite on existing advantages of developing environmental entrepreneurship in Ukraine, there are still many gaps in laws and regulations which complicate running business in Ukraine. Especially it refers to Act of Ukraine "Concerning the Electric Power Industry" [9]. Significant advantage of the Act was implementing of "green" tariff which allowed unifying the provisions of environmental legislation in Ukraine and the world and bringing Ukraine to a new quality level and strengthening positions of national enterprises at international markets. On the other hand, the Act doesn't contain any information about financial sources of "green" tariffs that’s why it complicates refunding process to energy-generating enterprises and companies. In order to solve stated above problems, it is necessary to strengthen state regulation of running "green" business in Ukraine and eliminate existing deficiencies in the field of using environmentally friendly technologies and organizing activities of enterprises involved in the field of environmental entrepreneurship.

During the process of presenting accounting of certain types of tax and charges it should be guided by norms of tax legislation. Procedure of calculating tax liabilities presented for each separate tax and charge. There is a need of detailed examination of component elements of calculation taxes amount and charges which effect on assessment of tax liabilities. First of all it is necessary to define tax assessment base for each type of tax. General conclusion provisions of law and regulation on tax assessment issues allowed organizing information of individual taxes and charges paid by milk processing plants (Table 2).

### Table 2. Taxes and charges paid by enterprises of green business in Ukraine *

<table>
<thead>
<tr>
<th>№</th>
<th>Type of tax / fee</th>
<th>Tax base</th>
<th>Tax rate / fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Income tax</td>
<td>Income of enterprise</td>
<td>2013 – 19 %, 2014 – 16 %</td>
</tr>
<tr>
<td>2</td>
<td>Individual income tax</td>
<td>Total income liable to taxation</td>
<td>15% applies to income that does not exceed tenfold of minimum salary, 17% applies to income that exceeds tenfold of minimum salary</td>
</tr>
<tr>
<td>3</td>
<td>Value added tax</td>
<td>Supplying of goods and services</td>
<td>To the end of 2013 – 20 %, starting from 2014 – 17 %</td>
</tr>
<tr>
<td>4</td>
<td>Fee for the first vehicle registration</td>
<td>Purchased vehicle</td>
<td>Depending on the types of pollutants into the atmosphere (from 54,05 to 1826401,21 UAH per 1 ton)</td>
</tr>
<tr>
<td>5</td>
<td>Environmental tax</td>
<td>Volume released of pollutants into the atmosphere, water resources, waste disposal</td>
<td>Depending on type of waste disposal (from 0,29 to 822,52 UAH per 1 ton)</td>
</tr>
<tr>
<td>6</td>
<td>Rental fee for transportation of refined products, natural gas and ammonia</td>
<td>Volume of oil and oil refined products, transportation distance</td>
<td>1,67 UAH for transit transportation of 1000 m$^2$ of natural gas per every 100 km of distance, 4,5 UAH for transportation of 1 ton of oil by main oil pipeline, 4,5 UAH for transportation of 1 ton of oil products by main products pipelines, 5,1 UAH for transit transportation of 1 ton of ammonia for every 100 km of distance</td>
</tr>
<tr>
<td>7</td>
<td>Fee for subsoil use</td>
<td>Volume of mined or depleted subsoil assets</td>
<td>Depending on volume of mined subsoil assets (from 0,57 to 34,51 UAH per 1 ton)</td>
</tr>
<tr>
<td>8</td>
<td>Fee for special use of water resources</td>
<td>Volume of used water</td>
<td>Depending on volume of used water (from 14,78 to 82,09 UAH per 100 m$^2$)</td>
</tr>
<tr>
<td>9</td>
<td>Fee for special use of forest resources</td>
<td>Volume of converted wood</td>
<td>Depending on volume of converted wood (from 0,33 to 3,68 UAH per 1 m$^3$)</td>
</tr>
</tbody>
</table>

* Source: summarized by the author on basis of the provisions of Tax Code of Ukraine [8].

Need to research taxable activities and assets for certain types of tax liabilities caused by a number of mistakes and irregularities during tax calculation at national enterprises. It was enhanced monitoring of state tax authorities for payment taxes and charges in order to solve existing problems as well as increased penalties in default of liabilities of the budget or late tax reporting. Stated above measures of control can make worse financial position of enterprise and its image among business partners. That’s why the accounting staff should calculate liabilities for taxes and charges very thoroughly, control to pass tax declaration in a timely manner, make payments to state budget by using tax calendars and adherence of strict tax compliance.

Tax rate applies to tax base calculations determined according to regulatory legal act which regulates its calculation and payment. Comparison of national and international approaches to definition of main types of taxes such as income tax, value added tax, individual income tax, led to the conclusion that there are very strict conditions of running economic activities in Ukraine. This is caused by complicated tax legislation and high rates of taxes and charges. The most favorable conditions for running business are in the USA, Canada and Asian countries. In order to improve economic situation in Ukraine and reduce tax burden on national enterprises the Tax Code of Ukraine is supposed to start reducing income tax rate (from 19 to 16% till 2014) and VAT (from 20 to 17% till 2014). Besides, the Code provides differentiated approach to application of tax rate on individual income depending on the total income of individuals. The rate is set on the level of 15% or 17%. Limit for applying rate of 17% determined by average monthly income equal to ten minimum wages.

Therefore, it is necessary to improve theoretical, methodological, organizational and practical principles of accounting and taxation of green business enterprises under modern conditions of integration of Ukraine into European community. It can be possible by harmonization of national and international principles of accounting liabilities for taxes and charges in terms of their recognition, evaluation and classification, especially in the part of separation of deferred tax assets, and deferred tax liabilities in the balance sheet, determining income tax by comparing income and expense of enterprise in the accounting period, as well as reclassification of taxes and charges by liabilities, tax dif-
ferences that appears at enterprises during running its economic activity, separating of canceled differences and its presenting in accounting records. In addition, while running entrepreneurship activities it is necessary to obey complex approach to recognition and payment of tax liabilities, definition of tax base, and calculating amount of tax and fees which should be paid to the budget. This will facilitate development of environmental business in Ukraine, implementing model of environmentally-clean manufacturing at enterprises of green business, preserving and efficient use of resources, reducing destructive effects of industrial and human activities on environment, consolidation of researches on adaptation of green technologies.

References

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PECULIARITIES OF APPROACHES TO THE ASSESSMENT OF CORPORATE MERGERS IN THE BANKING SECTOR OF UKRAINE

In this article peculiarities of existing approaches to the assessment of the results of corporate mergers and acquisitions are investigated, advantages and disadvantages of their application in the banking sector are identified, the algorithm of synergy effect from the merger of banks is substantiated, main sources of growth in the value of the corporation as a result of mergers (acquisitions) are discovered.

Keywords: corporate mergers and acquisitions; fair value; synergy effect; income approach; value assessment of the bank.

Goal setting. Corporate mergers and acquisitions create additional opportunities to enhance national and international competitiveness of the corporations based on the growth of equity cost parameters. The mechanism of corporate mergers and acquisitions in Ukraine has its differences. Expansion of corporate mergers and acquisitions in the banking sector in Ukraine takes place in terms of limited sources of additional financial resources, increased regulatory requirements for the capitalization of financial and banking institutions, scaling up the share of banks with foreign capital and the growth of influence of the international banking groups. Mechanism of valuation of the corporations in terms of undeveloped capital market and low liquid stock market remains insufficiently explored. This causes the necessity of improvement of the theoretical and practical aspects of calculating the synergy effect of the mergers and valuation of banks in terms of limitations that take into account the peculiarities of the situation in the financial sector of Ukraine, which resulted in topic of this article and its focus selection.

Analysis of recent researches and publications. Problems of corporate mergers and acquisitions are the subject of numerous works of foreign authors such as R.Brealey, J.Galpin, S.Guard, P.Gaughan, A.Damodaran, D.Demphalis, M.Iontsev, A.Lazhu, S.Myers, A.Radyhin, S.Reed, N.Rudick and others. The issues of corporate

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mergers and acquisitions in the financial and banking sectors are reflected in the researches of Ukrainian scientists such as: V.Bazylevych, V.Balitska, I.Bianc, Z.Vaslychenko, V.Geyets, N.Hrapko, V.Mishchenko, V.Nesterenko, G.Palamarchuk, O.Tereschenko and others. Emphasizing the importance of the scientific researches carried out on this subject, it should be noted that a number of theoretical and practical issues have not yet found a solution or remain debating and require further study. Thus, scarcely explored is the question of the selection of approaches to the calculation of the discount rate during corporate mergers and acquisitions in terms of undeveloped capital market, developing limitations in assessing the value of the corporation, the calculation of synergy effect of the merger of banks in Ukraine. These resulted in selection of the topic and focus of the research.

The aim of this work is to deepen theoretical basics of assessment of the market value of banks in the process of merger.

Results. In 2011, the market for corporate mergers (acquisitions) in Ukraine was equal to 4.75% of GDP compared to 2.21% in 2006. During the research it was found that taking into account the positive role of the concentration agreements to modernize the national economy the market for corporate mergers (acquisitions) should be not less than 10% of GDP. Among the largest mergers and acquisitions in the banking sector of Ukraine the following should be mentioned: acquisition by Russian "Vnesheconombank" 75% of stocks of Ukrainian Bank "Prominvestbank" worth 1.08 billion US dollars in 2008; acquisition in 2008 of 100% shares of "Pravex Bank" Ltd. by Italian Intesa Sanpaolo SpA for 750 million US dollars. It should be noted that before 2008 Ukrainian banks could be sold for 3-5 capitals, and in the midst of the crisis, banks actually were given for the debt, as in case with "Prominvestbank" [1].

Negative impact on the development of corporate mergers and acquisitions in Ukraine is carried out by the following factors:

- lack of large attractive investment corporations;
- undeveloped capital market and the complexity of determining the market value of corporations in the absence of quoted shares;
- the low liquidity of the securities;
- low level of development of the market of public offering of shares (IPO);
- limited sources of funds for mergers (acquisitions);
- non-transparency of the corporate ownership structure and asymmetry of information;
- high cost of debt, which limits access to bank financing. Corporation valuation is based on the application of the following concepts, including:
  - Fair value – a certain legalized standard value;
  - Residual value – the amount that could be gained from the sale of assets (in case of common or compulsory liquidation);
  - Investment value – the value of the company for a specific buyer / investor, taking into account the estimated synergy effect of combining of two companies.

To assess the value of the corporation traditionally three main approaches are used: income, property (cost) and comparative [2, p. 71]. Advantages and disadvantages of these approaches in the valuation of the results of mergers (acquisitions) in the banking sector are presented in Table 1.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Theoretical background</th>
<th>Peculiarities of application and methods</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| Income approach            | The theory of time value of money       | Valuation based on a comparison of future earnings to the costs taking into account the factors of time and risk.  
**Main methods:**  
- direct income capitalization  
- indirect income capitalization | The complexity of forecasting the expected cash flows.  
The value of the discount rate substantially affects the results of the calculations.  
For low-profit or unprofitable corporations the application of the method is limited.  
Failure to accurately incorporate market expectations of investors in terms of undeveloped capital market.  
Possibility of an error in the absence of accurate data on the type of distribution of random variables. |
| Property (cost) approach    | The theory of the accumulation of net assets | Valuation of the corporation in view of the costs incurred  
**Main methods:**  
- direct regeneration;  
- replacement;  
- accumulation of assets;  
- the present value of the estimated result of the liquidation of assets. | Significant differences between the book and market values of the corporation as a result of the effects of inflation, changes in market conditions, accounting methods used.  
The necessity of constant adjustment of the balance.  
High probability of an error in assessing corporations with complex capital structure. |
| Comparative approach       | The theory of market counterparts       | Valuation based on comparisons with similar entities or with share prices of such corporations.  
**Main methods:**  
- market agreements  
- sales comparison | Difficulties in accurate determining of the amount of premium for the elements of controls for full or controlling interest.  
No equivalent substitute with similar properties.  
No representative statistical sample to compare individual counterparts.  
Failure to use by corporations with variable cash flows.  
The necessity of valuation with criterion of "sufficient distance" ("arm's length" criteria).  
Difficulties to ensure adequate transparency of the information. |

Table 1. Advantages and disadvantages of approaches for the valuation of corporate value as a result of mergers (acquisitions) in the banking sector of Ukraine

Source: developed by the authors

In accordance with International Financial Reporting Standards (IFRS) assets and liabilities of companies should be reflected with their fair value [3]. International Valuation Standards interpret the concept of "fair value" as a certain amount by which interested and knowledgeable parties of the agreement may pay for obligations or pay the equity. In assessing the fair value all assets of the company are divided into specialized and non-specialized, relevant and non-core. Assessment of fair value in agreements of corporate mergers (acquisitions) is one of the tools to increase capitalization of the companies as it allows to properly consolidate the assets.
Selection of calculation methods depends on the belonging of an asset to a specific group. The main components of the financial valuation of the company with fair value while performing mergers (acquisitions) are shown in Fig. 1.

The residual value is the value that company owners can receive on liquidation of the company and in separate sale of its assets. Evaluation of the liquidation value of the company is carried out in the following cases: the company is in a state of bankruptcy or has serious doubts about its ability to remain an active company, and at a time when the cost of liquidation may be higher than in continuation of a company. The liquidation value of a company is calculated by deducting from the adjusted value of all assets the balance amount of current costs associated with the liquidation of the company and the value of all liabilities.

Regarding investment costs, it cannot be lower than market value. Investment value by definition must be greater than the market value, which may be primarily due to synergy effect between this company and other business assets of the investor.

In comparative approach the major criterion is criterion of "sufficient distance" ("arm's length" criteria), according to which in realization of mergers (acquisitions) the company-accepter and the company-seller act independently of each other and have no other relationships with each other. Compliance with this criterion means that none of the interested parties can exert pressure on the other, and their relationships on the current transaction are determined only on market principles [4, p. 127].

In the process of company's valuation and in practice using a number of different multipliers, which are often divided as follows:
1) actual: those in the denominator of which is the actual rate (sales in units, etc.)
2) financial:
   - Balance – are determined according to the balance sheet:
     * Price / book value of assets* (P / BVA);
     * Price / book value of capital* (P / BVC)
     * Price / net assets value* (P / NAV)
     * Price / value of fixed assets (buildings, machinery and equipment)* (P / PP & E)
     * Price / replacement cost of net assets* (so-called multiplier "q-Tobin") and so on.
   - Income – are calculated according to the income statement:
     * Price / sales* (P / S),
     * Price / profit from sales* (P / Sales and Margin or P / EBIT)
     * Price / profit before tax, interest and amortization* (P / EBITDA)
     * Price / net income* (P / E)
     * Price / cash income* (P / Cash earnings),
     * Price / net cash flow from operating activities* (P / OpFSF)
     * Price / net cash flow* (P / FCF),
     * Price / dividends* (P / DIV) and others.

![Fig. 1. The main components of the financial valuation of the fair value of newly created company as a result of merger (acquisition)](image-url)

Source: developed by the authors

The main sources of growth in value of the new company as a result of the merger (acquisition) are presented in table 2. Efficiency of an agreement in these conditions is determined by the total change in value due to the influence of all sources.

Table 2. The sources of growth in value of corporation as a result of the mergers (acquisitions)

<table>
<thead>
<tr>
<th>Key figures</th>
<th>The sources of growth in value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VA (Value Added) – changes in value of the company as a result of an agreement; FV (Fair Value) – fair market value of the company; MV (Market Value) – market price of specific agreement; PV of Synergy – present value of synergetic cash flows, which arise as a result of mergers and acquisitions</td>
<td>Synergy</td>
</tr>
<tr>
<td>VA = FV – MV</td>
<td>VA = PV of Synergy</td>
</tr>
<tr>
<td>Additional factors, which influence on increase in value</td>
<td>Reduction of financial risks through diversification and vertical integration</td>
</tr>
<tr>
<td>Management state of the acquired company</td>
<td>Operational and financial economies of scale</td>
</tr>
<tr>
<td>Favorable (unfavorable) market conditions</td>
<td>Tax effect</td>
</tr>
<tr>
<td>The level of information distribution between market participants</td>
<td></td>
</tr>
</tbody>
</table>

Source: developed by the authors
The influence of each of the two determined sources to the cost of companies can be negative (\(VA<0\)). An example of this may be a merger (acquisition) of companies with anergy (negative synergy). For example, during periods of adverse conditions of the stock markets, if it will be necessary to sell the company in a short time, the transaction price may be less than fair market value [5, p. 211].

A prerequisite for reliable assessment of changes in the value of the corporation as a result of the merger (acquisition) is the appropriate level of capital market development. In terms of expansion of the stock market an important source of growth in the value of the bank through the merger (acquisition) is an opportunity to buy assets undervalued by the market at any given point of time.

The experience of developed stock markets suggests the feasibility of using options in agreements of mergers and acquisitions. In contrast to Ukraine, in foreign practice, this derivative is widely used as a tool of the mechanism of corporate mergers (acquisitions).

In assessment of the value of banks that are part of international banking groups it is necessary to evaluate the foreign exchange risks, taking into account peculiarities of national legislation regulating property relationships, foreign investments and capital outflow [6, p. 84]. An important issue here is the accounting of currency exchange rates.

During the research it was found that for assessment of synergy effect of mergers in the banking sector it is more beneficial to use income approach, combined with the projected financial statement method (Table 3).

### Table 3. The algorithm for evaluation of banks’ mergers by applying the income approach, combined with the method of projected financial statement

<table>
<thead>
<tr>
<th>№ stage</th>
<th>Description of the stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grouping of assets</td>
</tr>
<tr>
<td>2</td>
<td>Determination of the proportion of certain groups of assets in the balance sheet total</td>
</tr>
<tr>
<td>3</td>
<td>Grouping of liabilities</td>
</tr>
<tr>
<td>4</td>
<td>Determination of the proportion of certain groups of liabilities in the balance sheet total</td>
</tr>
<tr>
<td>5</td>
<td>Grouping of revenues by the areas of their receiving</td>
</tr>
<tr>
<td>6</td>
<td>Determination of the proportion of certain groups of revenues in total revenue</td>
</tr>
<tr>
<td>7</td>
<td>Grouping of expenses by the areas where incurred</td>
</tr>
<tr>
<td>8</td>
<td>Determination of the proportion of certain groups of expenses in total expenses</td>
</tr>
<tr>
<td>9</td>
<td>Receiving other inputs and assumptions</td>
</tr>
<tr>
<td>10</td>
<td>Calculation of the estimated values of the profitability measures by the areas of investments</td>
</tr>
<tr>
<td>11</td>
<td>Calculation of the estimated value of passive operations by sources of funds (taking into account additional assumptions)</td>
</tr>
<tr>
<td>12</td>
<td>Development of the estimated structure of liabilities (by separate items) and fund of statutory provisions</td>
</tr>
<tr>
<td>13</td>
<td>Assessment of the estimated values of interest income (calculation of earnings gain and income from investments)</td>
</tr>
<tr>
<td>14</td>
<td>Development of the estimated balance sheet of banks by assets and determination the balance sheet total (by summarizing of the individual figures)</td>
</tr>
<tr>
<td>15</td>
<td>Calculation of the estimated values of interest expenses</td>
</tr>
<tr>
<td>16</td>
<td>Calculation of the estimated values of net income, income tax, net income and dividends</td>
</tr>
<tr>
<td>17</td>
<td>Calculation of the estimated values of net cash flow (NCF) and discounted cash flow (DCF) for the next five years</td>
</tr>
<tr>
<td>18</td>
<td>Assessment of banks’ present value (PV) in post-forecast period</td>
</tr>
<tr>
<td>19</td>
<td>Ensuring comparability of conditions on reporting dates (taking into account the impact of macroeconomic factors influencing the rate of discounting of cash flow)</td>
</tr>
<tr>
<td>20</td>
<td>Evaluation of synergy effect of the realization of merger of the banks</td>
</tr>
</tbody>
</table>

Source: developed by the authors on the basis of [7, p. 246]

The subject matter of the method of the projected financial statement that is widely used in corporate financial planning, is to predict financial needs (results) based on forecast of the financial statements.

The relationship of strategic consequences related to corporate restructuring and current financial planning is provided in the realization of the following major tasks:

- formalization of strategic objectives of the corporation’s development in respective financial terms (such as: \(BV\), \(SALES\), \(NP\), \(GP\), \(ROA\), \(ROE\), \(CIF\), \(COF\), etc.);
- grouping of financial information in accordance with the requirements for the disclosure to different groups of interested parties, which is reflected in respective financial plans and reports;
- determination of financial conditions and assumptions required for the long-term and short-term financial solutions;
- adjustments of financial plans in the process of implementation of strategic objectives related to the merger, coordination of relationships with other entities that are part of the banking group.

The calculation procedure of the bank’s value through the application of these approaches includes the following stages:

- generation of the base of input data and determination of assumptions;
- development of the estimated structure of liabilities and calculation of estimated values of individual components of revenues and expenses of the bank;
- determination of the bank’s balance sheet total;
- calculation of net cash flow;
- calculation of the value of the bank;
- calculation of synergy effect.

On the basis of these approaches the evaluation of the merger of two Ukrainian banks was performed: PJSC “First Ukrainian International Bank” (hereinafter – the Bank 1) and JSC “Dongorbank” (hereinafter – the Bank 2), the merger of which took place in July 2011. The merger of banks was carried out by increasing of the share capital and issue of shares of the Bank 1 in the amount of registered share capital of the Bank 2. The terms and conditions of the exchange of shares of these banks were also approved. The input information base for the calculation is public data sources, including annual reports of banks, the NBU data and financial statements of banks in Ukraine, data of news agencies and stock traders.

The approach applied involves a separate calculation of the value of banks on reporting dates before merger (as of 01.01.2011) and after (as of 01.01.2012). Obligatory condition of the results of the banks’ valuation recognition is to ensure comparability of conditions on the reporting dates, which takes into consideration macroeconomic factors influencing the discounting rate of the cash flow.
The income approach applied to valuation of banks provided cash flow forecast for the next five years, followed by consideration of value in post-forecast period. In the text and in calculation tables for the relevant years of forecasting reference characters \( t = 1, 2, 3, 4, 5 \) were used as corresponding years indicated above.

To the other input data and assumptions the estimated values of profitability and values of certain items of assets and liabilities on the relevant date were considered. They were determined based on actual bids of placed and attracted resources, expert opinions about future changes in interest rates on the world financial market in general and in Ukraine by years of forecasting. Additionally the size of banks, the actual structure of assets and liabilities, goodwill, risk, changes in the activities etc. were taken into account.

Important was forecasting of banks' liabilities growth, which subsequently was used to determine their future revenues and expenses. Additional assumptions used in the valuation of banks are listed in Table 4.

<table>
<thead>
<tr>
<th>№</th>
<th>Assumption</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Growth rate of the administrative and other operational expenses</td>
<td>5.0%</td>
</tr>
<tr>
<td>2</td>
<td>Allocation rate to the statutory provisions' fund for the entire forecast period</td>
<td>2.5%</td>
</tr>
<tr>
<td>3</td>
<td>The structures of revenues and expenses are the same</td>
<td>Do not change</td>
</tr>
<tr>
<td>4</td>
<td>Duration of the portfolios</td>
<td>Is not taken into account</td>
</tr>
<tr>
<td>5</td>
<td>Increase in assets and liabilities</td>
<td>Evenly over the forecast periods</td>
</tr>
<tr>
<td>6</td>
<td>The structure of assets</td>
<td>Do not change</td>
</tr>
<tr>
<td>7</td>
<td>Income tax</td>
<td>25.0%</td>
</tr>
<tr>
<td>8</td>
<td>Share of net profit paid as dividends</td>
<td>100.0%</td>
</tr>
<tr>
<td>9</td>
<td>Interval of the cash flow forecasting</td>
<td>Five years</td>
</tr>
<tr>
<td>10</td>
<td>The discount rate</td>
<td>Profitability of debt securities of the bank which is assessed</td>
</tr>
<tr>
<td>11</td>
<td>Merger of banks were conducted by increasing of the share capital and issue of shares by the Bank 1</td>
<td>In the amount of the registered share capital of the Bank 2</td>
</tr>
</tbody>
</table>

Source: developed by the authors

At the second stage of calculations on the basis of projected financial statement method the estimated structure of liabilities was developed and estimated values of individual components of banks' revenues and expenses were calculated.

Cash flow \((CF_t)\) is formed as the sum of three components: net income, allocations to statutory provisions' fund and the value of depreciation charges (for \( t \)-th period). In Table 5 the results of calculations of banks' projected cash flows are shown.

![Table 5. Estimated values of net cash flows (NCF) of the banks, thous. UAH](image)

<table>
<thead>
<tr>
<th>Figure</th>
<th>( t=1 )</th>
<th>( t=2 )</th>
<th>( t=3 )</th>
<th>( t=4 )</th>
<th>( t=5 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCF (Bank 2): 01.01.2011</td>
<td>76333,0</td>
<td>89420,0</td>
<td>125853,0</td>
<td>154873,0</td>
<td>185079,0</td>
</tr>
<tr>
<td>NCF (Bank 1): 01.01.2011</td>
<td>485837,0</td>
<td>555133,0</td>
<td>579597,0</td>
<td>626013,0</td>
<td>683987,0</td>
</tr>
<tr>
<td>NCF (Bank 1): 01.01.2012</td>
<td>825005,0</td>
<td>865298,0</td>
<td>899381,0</td>
<td>985990,0</td>
<td>1085947,0</td>
</tr>
</tbody>
</table>

Source: developed by the authors

Assessment of banks was held on the basis of determination of discounted cash flows with adding the banks' present values in post-forecast period \((PV)\).

In case of applying the income approach to the bank's valuation it is most appropriate to determine the discount rate on the basis of market data. As the discount rate, profitability of debt securities of the assessed bank can be used, in particular the profitability of eurobonds. This implies the fact that the expected return of business for shareholders cannot be higher than the market estimate of such return by foreign investors.

As of 01.01.2011 and 01.01.2012 on the Swiss stock exchange in circulation were coupon Eurobonds of the Bank 1, profitability of which on 01.01.2011 was 11.00%, and on 01.01.2012 – 17.05%. Taking into account the fact that for both banks the owner is the same, using a discount rate on 01.01.2011 in size of 11.00% to the assessed banks is considered to be correct.

The assessment of the bank's present value in post-forecast period \((PV)\) was carried out as follows:

\[
PV = \frac{CF_t \times (1+g)}{(r-g) \times (1+r)^{t-1}} \quad (1)
\]

where: \( CF_t \) – cash flow for the year \( t \); \( t^* \) – number of the latest year of the forecast; \( g \) – the value of revenue growth in post-forecast period (excepted by the experts at 2% level).

The total value of the bank \((V)\) was calculated by the formula 2:

\[
V = \sum_{t=1}^{5} \frac{CF_t}{(1+r)^t} + PV \quad (2)
\]

Based on calculations using the standard MS Excel functions the values of the assessed banks on specified dates were obtained. These values are listed in Table 6.

![Table 6. Synergy effect from the merger of banks, thous. UAH](image)

<table>
<thead>
<tr>
<th>Nº</th>
<th>Merger objects</th>
<th>Figures' values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In macroeconomic conditions as of 01.01.2011</td>
<td>In macroeconomic conditions as of 01.01.2012</td>
</tr>
<tr>
<td></td>
<td>Discount rate, %</td>
<td>Market value, thous. UAH</td>
</tr>
<tr>
<td>1</td>
<td>Bank 2</td>
<td>11,00</td>
</tr>
<tr>
<td>2</td>
<td>Bank 1 (before merger)</td>
<td>11,00</td>
</tr>
<tr>
<td>3</td>
<td>Bank 1 (after merger)</td>
<td>11,71</td>
</tr>
<tr>
<td>4</td>
<td>Synergy effect as a result of the merger (acquisition)</td>
<td></td>
</tr>
</tbody>
</table>

Source: developed on the basis of calculations [8]
However, the evaluation of synergy effect of the realization of the merger (acquisition) of the banks only using such data will be incorrect, as it does not take into account the impact of macroeconomic factors on the estimated value of the banks. The issue is that the formation of profitability of stocks of the issuer, especially if they are traded on the open international markets, substantially depends on changes in macroeconomic risks in the country of origin of the issuer. In such circumstances, the profitability of securities of the issuer should include and cover the risks of the country of origin, and specific risks inherent to the issuing bank directly [9, p. 134].

For further analysis Eurobonds of Ukraine were chosen with the closest to the Bank’s 1 bonds maturing. In particular, these may be bonds issued with maturity in early 2015 – ISIN RegS: XS0543783434. Yield of these stocks on 01.01.2011 amounted to 5.07%, and on 01.01.2012 – 10.41%. Arguably, within the research period international investors assessed risk growth of Ukraine as a country issuing debt securities at 5.34%.

Calculations of the value of the studied banks in macroeconomic conditions of risk on 01.01.2011 were performed, using the discount rate on 01.01.2011 at 16.34% and on 01.01.2012 at the discount rate – 11.71%.

Using obtained data the synergy effect from banks’ merger was calculated (Table 5). Obtained estimations indicate a positive synergy effect from the merger. It should be mentioned that the actual increase in profit of Bank 1 in 2011 was for 11.53% and for 23.47% of assets, which resulted in improvement of the Bank’s 1 position in the total assets of banks in Ukraine from 13 to 8 seat. By increasing the capitalization, the Bank 1 increased credit limits for customers and reduced operating costs through the economy of scale.

Conclusions on the basis of the results of research:
A valuation of the new bank created as a result of the merger on the basis of the method of modified income approach and the use of forecast of bank’s financial performance indicators were held. The results of the carried research demonstrate the feasibility of applying the income approach, combined with the method of projected financial statements for the valuation of the results of bank mergers and calculation of synergy effect. It was found that the main source of banks value growth as a result of the merger is synergy effect. Actual synergy effect was estimated at 1,04-1,36 billion UAH level, taking into account macroeconomic conditions on 01.01.2011 and on 01.01.2012. An important step in the valuation process is to determine additional assumptions, such as: ensuring constancy of assets, revenues and expenses structures, evenness of liabilities and assets, discount rates growth and others. According to the Ukrainian practice in an undeveloped capital market the fair value of the corporation is complicated due to lack of adequate information for calculation and non-transparency of mergers and acquisitions agreements.

References

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ОСОБЛИВОСТІ ПІДХОДІВ ДО ОЦІНЮВАННЯ КОРПОРАТИВНИХ ЗЛІТТІВ У БАНКОВСЬКІМ СЕКТОРІ УКРАЇНИ

В статті досліджено особливості існуючих підходів до оцінювання корпоративних зліттів і позикань, визначено переваги та недоліки їх застосування у банківському секторі, обґрунтовано алгоритм обчислення ефекту синергії від злиття банків, розкрито основні джерела зростання вартості корпорації внаслідок зліттів (позикань).

Ключові слова: корпоративні зліття та позикання; справедлива вартість; ефект синергії; дохідний підхід; оцінка вартості банку.

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ОСОБЕННОСТИ ПОДХОДОВ К ОЦЕНКЕ КОРПОРАТИВНЫХ СЛИЯНИЙ

В статье исследованы особенности существующих подходов к оценке корпоративных слияний и поглощений, определены преимущества и недостатки их использования в банковском секторе, обоснован алгоритм расчета эффекта синергии от слияния банков, раскрыты основные источники возрастания стоимости корпорации вследствие слияний (поглощений).

Ключевые слова: корпоративные слияния и поглощения; справедливая стоимость; эффект синергии; доходный подход; оценка стоимости банка.
FORMATION OF ENTERPRISE INTELLECTUAL CAPITAL IN CONTEXT OF RESOURCE THEORY

The main content of the resource theory and description of its evolution in three stages were considered in this article. The first stage was the formation of the classical concept of the resource, the second – the origin and development of the concept of core competencies and dynamic organizational capabilities, and the third is associated with the formation of the theory of resource advantages. The nature and the necessity to identify new resource elements (core competencies, dynamic capabilities and organizational routines) were characterized in the context of the selected stages. The signs of sustainable competitive advantage and types of economic rents that arise on the resource base were generalized. There is a connection between resource theory and concept of knowledge management based on identification of intellectual component in the economic nature of the core competencies and organizational abilities. The basic approach to the classification of resources and their elements, which form the intellectual capital of the company was described. New elements of economic resources such as competencies, organizational abilities, routines and elements of intellectual capital are in close connection. It is concluded that the core competencies are best developed in human client and networking elements of intellectual capital, dynamic organizational capability in innovative capital and routines in process capital of an enterprise.

Keywords: resource theory, core competencies, dynamic organizational capability, intellectual resources, intellectual capital, sustainable competitive advantage.

Introduction. In the last years of the XX-th century the transition to a post-industrial economy began in developed countries. This is global and intellectual economy where intangible assets play the role of the leading production factors. At the industry level, these trends appear through increases in knowledge and technological convergence, in enhancing intra-integration and global competition. At the level of enterprises postindustrial trends developed in the humanization of resources and distribution of network and virtual organizational forms of business, in the global “spread” of the value chain and on the concentration of firms in their core competencies. This fundamental transformation of modern business environment led researchers to focus on finding organizational resources, the use of which would enable to give an adequate response to changes in economic system.

Under these conditions, the mission of sourcing development, continuous updating and leadership of the company are compiled by resource theory. It suggested the new logic of economic analysis, focused on mechanisms of competitiveness of enterprises on the basis of unique resources. Modern concepts of resource theory are at the center of attention of researchers today and its main categories – assets, resources, competencies and organizational capability are the subject of increased scientific interest.

Literature review. Resource approach was originated with the need to explain the nature of sustainable competitive advantage under conditions of highly turbulent environment. Basis of the resource approach was laid by the publication "Theory of firm growth" by E. Penrose in 1959. [2] The idea of defining the resource component of enterprises economic efficiency was justified there. Scientific opinions on the role of resources in improving company performance and on the different use of identical resources in the context of business management were further developed in researches in the 60’s of last century. Further development of the resource theory is related with publications of B. Wernerfelt, J. Barney, R. Grant, R. Ramelt, D. Teece, G. Hamel, C.K. Prahalad. [2] The defining idea of resource approach is to consider the enterprise as a set of resources that are the primary determinants of its effective operation.

An important feature of this theory is the wide interpretation of the term "resources", which in literature is used to describe almost everything that allows the company to create and implement strategies that improve its effectiveness. In more traditional sense resources are determined as a source of inventories or of certain economic benefits. According to one of the famous researcher of resource theory D. Tis, resources should be considered “in relation to specific company assets that are difficult, if not impossible, to imitate.” [1, p. 147] This wide view on resources led, first, to their diverse classification, and secondly, to the priority attention of researchers on categories of assets which have mainly intangible nature. Analysis of current domestic and foreign scientific researches suggests that there is some imbalance between the role of intellectual assets to ensure a high level of competitiveness, and the level of study of effective management applied aspects.

The main reason for this, on our opinion, is that a concept of core competencies and organizational capability, despite a long scientific interest, continues to be not enough integrated in modern decision-making process. To a large extent this may be due to the lack of understanding their essential nature, which does not allow using appropriate management practices. In particular, the measuring and evaluating of core competencies and organizational capabilities remain as controversial issue, which does not allow to create the process of their management. Correlations between basic categories of resources approach and elements of intellectual assets on our opinion may be a perspective direction to solve this problem. In this case we will consider as working hypothesis the idea that the basic categories of resource approach can be identified as intellectual resources.

Purpose. The purpose of the paper is to justify the impact of the resource theory provisions on the formation and identification of the elements of intellectual capital.

Results. Scientists usually distinguished three stages in the development of resource concepts. The first stage – the formation and development of the so-called classical resource concept, mostly associated with the names of J. Barney B. Wernerfelt. [2] The first scientists in 1986, explained the nature of a sustainable competitive advantage on the resource-based view and determined main resource characteristics. They called "VRIO-quality":

- Value – a resource is valuable if it helps the firm to meet external threats or exploit an opportunities. Common
competitive foundations for firms are efficiency, quality, customer responsiveness, and innovation. If resource helps bring any one of these four things then it is valuable;
- Rarity – indicates how rare is resource among the competitors in the industry;
- Imitability – a resource is inimitable if it is difficult for competitors to acquire or to substitute it.
- Organization – if the resource is built-in the strategy of the company.

The beginning of the fundamental development of resource concepts in strategic management was done in B. Wernerfelt’s article "Firm resourcing interpretation" (1984). [2] There was first shown the feasibility of firm analysis in terms of resources than products and was hypothesized that this approach may become a new paradigm for learning strategies. The best way for company growth in the long run was shown in finding a balance between available resources and supporting the development of new ones.

The second phase, on which an intellectualization of resource approach took place, associated with the forming of the concepts of core competencies and dynamic organizational capabilities. These categories significantly expanded and modified the content of the resource by adding elements of internal origin – organizational capabilities, competencies, routines etc. These terms now form a unique content of resource theory and its actual contribution to the study of the mechanisms of competitive advantages.

The concept of core competencies is one of the current approach within which new economic categories of resource theory was formed. The authors G. Hamel and C.K. Prahalad entered into scientific circulation the term of competence as universal, generalizing category, reflecting the special knowledge of the company, experience and skills that distinguish it from competitors. The concept of competence formed in condition of leading steps of foreign business to transition from an industrial to a knowledge economy, where the key requirement is to achieve competitiveness by "intellectual leadership" in their field. Based on the experience of the best companies in the world, the authors concluded that the main sources of competitive advantages are the ability of management to consolidate disparate technological, managerial, organizational and practical skills and knowledge in corporate competences. Thus, the resource concept is changing view on the essence of the strategy of competitiveness – the transition from adaptive to the advanced type of development.

The term "competence" in general is treated as a set of interrelated specific skills, technologies, knowledge and abilities, which are carried, collectively or individually, by staff. The formation of enterprise competencies are closely linked to the accumulation and functioning of corporate knowledge, experience, skills and other resources of information and intellectual nature.

The main basis for interpretation of dynamic capabilities was developed by D. Teece, E. Pisano and A. Shuen who defined this term as the ability to integrate businesses, create and make reconfiguration of internal and external competences responding to rapid changes in the environment. "We call this potential to achieve new forms of competitive advantage as dynamic capabilities. The term "dynamic" means that you can upgrade skills in order to achieve consistency with the changing business environment. The term "capabilities" emphasizes the key role of strategic management in proper adaptation, integration and reconfiguring internal and external organizational skills, resources and functional competencies in order to comply with the business environment." [1, p.146] The purpose of the firm is to improve the productivity capabilities of other resources.

Formation of company capabilities is the result of the origination of complex relationships between skills, resources and accumulated knowledge. There is a consensus in common characteristics of organizational capabilities despite the differences in their definitions in modern literature and regardless of industry, functional and technological features. They are considered to be:
- Firstly, the capabilities have value for the firm to create different products and different markets;
- Secondly, the capabilities are embedded in organizational routines and can maintain its value if individual employees leave the organization;
- Thirdly, the capabilities are implied, that why it is difficult to present them in the form of algorithms behavior or operating procedures.

An important issue is to clarify the controversial relationship between the terms "capability" and "competence". Existing scientific opinions define their range of interchangeable to differentiated categories. V. Katkalo justifies that they can be used interchangeably, but there are three different cases using term capabilities. First, the capability can be associated with one of the functional areas of management (e.g., the ability to promote brands, production management and procurement). Another case – they can be linked to specific technologies or types of products. This type of capability is the focus of the concept of core competencies (C. K. Prahalad and G. Hamel). Thirdly, there may be the ability of organizations to coordinate various activities or relationships between elements of the value chain. However, according to V. Katkalo the greatest potential for development this approach is a view in which "... one of the category used to describe phenomena that refers to another, namely competence are combinations of capabilities and capabilities are reconfiguration mechanism of competencies." [2, p. 348]

The result of the implementation of organizational capabilities in the strategic management of the company is their using in business processes and as the basis of organizational routines. This is a new category for the resource theory, which is associated with the processes of functioning competencies and organizational capability in the real business.

R. Nelson and S. Winter noted that organizational routines reflect regular and standard business processes and integrated competences and functional capability of the enterprise in these processes. Formation of organizational routine procedures is going in close integration of knowledge and understanding between members of a team that provides effective coordination of organizational processes. Forming of organizational routine is an important step in the transformation of internal instructions, methods and regulations of the specific organizational competence.

It should be noted that organizational routines and processes are a key elements in making available strategic resources in main products of the company. Thus, in addition to the obvious impact on key products, they also affect the firm’s resources, mainly through organizational learning, training, development of new technologies, successful financial politics. Thus, with the development of resource theory it is getting clear that resources are not productive without their involving in processes of forming of competences and routines. The available organizational capabilities and core competencies of the enterprise implemented in specific business processes with using other resources are the basis of competitiveness. Their value to the com-
company increases when they are functioning in business, and when they create new combinations of strategic resources.

This led to move to the third stage in the development of resource theory, the basis of which was the concept of resource advantages and asymmetries.

Further researches of resource concepts (eg, D. Miller) posit the idea that success on the market depends not on whether company has unique resources or opportunities, but in asymmetry of the resource set. Skills, processes or assets that competitors do not have, and that cannot be easily copy, imitate or buy on the market are considered as the sources of asymmetry. Many successful companies have been able to transform these asymmetries into sustainable competitive advantages by opening, providing and implementing them in their activities. In foreign publications, these ideas are incorporated within the new progressive theories of enterprise resource advantages.

At first the basic provisions of this theory were formulated in 1995 by Shelby Hunt and Robert Morgan. [3] Resource advantages theory became strengthened and is actively described by foreign scientists in 2001-2005 and today is the last progressive point of view that reflects the confidence not only theoretical legacy, but also the practical realities of science and new business formation. The only fact of the possession of resources and opportunities for their use and reproduction is not a prerequisite for success of the enterprise. It is important to invent new kind of resources, which has none of the competitors, i.e. asymmetries, and only they can provide a sustainable competitive advantage. The sources of such asymmetry are the skills, processes and assets that competitors do not have, and that cannot easily copy, imitate or acquire on the market. At this stage of the resource theory the focus of resources management was shifted to the creation, development and protection of those that are strategic for the company.

Economic effects of resource management are in gaining of a monopolistic, ricardian, shumpeterian and competitive rents. In their analysis it is important to note that the classical resource theory uses mainly ricardian rent – income from using unique resources, which can be converted into competitive advantage. Concept of core competencies and dynamic capabilities suggest that businesses are gaining shumpeterian rents through better use of resources in business processes and the formation of new combinations through organizational capacity and competence. Comparative rents are gained as result from long-term inter-firm relationships and of inter-organizational competitive advantage: specialized assets generated during the interaction of our partners, sharing knowledge, complementary resources and capacity, effective management.

Foreign economists justify the division of resources into two groups: available (root) and strategic. Available resources are the main assets of the company to ensure its operation. Every company has access to the same basic resources, like its competitors, but the companies are different in methods, available to manage such resources. Available resources are used for storing different types of resources – strategic, and only his process creates value to stakeholders. The company needs to maintain a high proportion of the strategic resources in resource portfolio, to improve the strategic importance of intellectual resources and search for new resource combinations.

The modern vision of resource competitive advantage lies in their following components:

- ability to attract new businesses to their species, identify unique combinations in comparison with competitors;
- holding of exclusive and limited resources;
- creating a nonrenewable resource, not available to other market participants;
- identifying strategic resources that provide income generation, high effectiveness and efficiency of customer value creation in promising markets.

The study of the evolution of resource concepts indicates that the process of their formation was difficult and long. Early scientific views are formed under the influence of purely theoretical assumptions, which do not have sufficient reasoning. Each subsequent stage of strategic management theory led to the formation of practical arguments in favor of theoretical positions of resource concepts. Recent researches are inextricably linked and justify the possibility of forming a sustainable competitive advantage on resource base. Therefore, further improvement of platform of resource theory is considering in it accordance to global dimension of intellectual economy.

Development of resource theory and the possibilities of its potential using is associated largely with issues of valuation of new resources elements: strategic resources, organizational capabilities, core competencies. The above consideration of the nature and evolution of resource theory, as well as approaches to resource management allow us to interpret the economic nature of these concepts as intellectual assets. Despite contradiction and polemical character of many aspects of resources theory and intellectual capital, we consider well founded the opinion on the conformity of main strategic resource elements as component of intellectual assets.

Resource theory is multidisciplinary by nature, and therefore shows its close relationship with other areas and concepts of strategic management, including modern theory of knowledge management. From the standpoint of the resource theory knowledge are considered as an important resource of the company, whose role especially increase in the formation of modern knowledge-based economy. Research of the formation and use of corporate knowledge caused with more economic content such terms as experience, competencies, skills, abilities, routines. According to the resource approach the main factor of the success of the company is the acquisition of new knowledge and abilities through continuous organizational learning. It means about the transition from a closed to an open innovation model as new paradigm in business development.

The studies of the nature of intellectual resources are devoted to works of foreign scientists: R. Grant, J. Ruus, H. Itami, L. Edvinsson, M. Malone, P. Strassman, E. Penrose, T. Stewart, K.-E. Sveibl, D. Sullivan, L. Prusak, J. Klein, B. A. Leoniey. Among domestic researchers are O. Kendyukhov, A. Butnik-Seversky, A. Chukhno, V. Bazylevych, A. Stryzhak and others. Almost all scholars define the knowledge and information as the basis of intellectual resources, but their content is interpreted individually, using different terms, but often such as "intangible assets", "intellectual assets", "intellectual capital", "intellectual resources", "intellectual capacity". Almost all of these economic categories are used in literature recently, and thus are characterized by ambiguity and inconsistency of views of researchers. Some authors consider these terms synonymous and offer interchangeable use of them, explaining their existence in different areas of use. Other researchers consider these terms as part of each other. In this paper, we consider the as a common category of "intellectual resources" and will consider it in the context of resource theory.

There are many different classifications of resources: by the physical meaning, by the intending in the production
process, by the level of use in the manufacturing process and so on. James Harrington considers a term "resources" regarding to all types of assets. [4] According to the classification, resources are divided into financial, physical, human, intellectual, informational, organizational and technical. Ruus J. and Pike S. identified two key types of enterprise resources: traditional, which consist of cash and material; and intellectual resources – resources of relations (all relationships that the company has with other organizations and individuals outside), organizational and human. This division is due to the fact that each group has characteristics that are important from the standpoint of management. [5] Classification and structure of resources by these authors are presented in Fig. 1. The content of the intellectual resources (relationships, human and organizational) essentially corresponds to the characteristics of core competencies, dynamic capabilities and organizational routines. This indicates the transformation of these resources in the elements of intellectual capital.

Thus, we can argue about the close connection between the concepts of strategic resources and elements of "intellectual capital." Despite the fact that the interpretations of intellectual capital and its components has no common point of view, however we can say that a number of researchers confirm with such a view. In support of this we give a classification of intellectual capital, proposed by Lvashovska and Bayburyna. [6] They justify modified model of intellectual capital and identified it several levels.

Components of first level are presented in a model as human, organizational (which is divided into a process and innovation), client and cross-border capital (Fig. 2). Human capital is seen as a set of skills and abilities of personnel. Staff skills form the basis for innovation and strategic renewal of the company and thus increase its value base.

Most researchers identify components of human capital such as competence, creativity and attitude of employees to the organization. Client capital is a value, resulting in relationships with individual and institutional clients, which provides a contribution to the value of company through the mechanism of increasing cash flow.

Innovative capital is considered as part of an organizational capital. It includes a set of intellectual property rights, and no formalized legally innovation: technological and organizational know-how, new entrepreneurial concepts and innovative achievements, innovative tools, culture, the so-called innovative coaching of managers that support the innovative mentoring.

The second subcomponent of organizational capital – is a process capital, which refers to the infrastructure of the company (IT, business-process, etc.). This is business routines, which are already well-established models of corporate internal interaction. Companies with sustained process-subcomponent of intellectual capital tend to create favorable conditions for the use of human capital as allow almost fully realize its potential, and accumulating thereby innovative and client capital. There are such subcomponents of the second level allocated in the process capital: corporate culture, organizational structure, operational processes and information systems. Finally, the fifth component of the intellectual capital is network capital. It is a value that is creating in the quality and stability of relations with contractors, suppliers, contractors, competitors and necessary contractors related industries.

Determination of the components of intellectual capital allowed to justify author vision of it consolidated relationship with the terms of resource theory (Fig. 2).

Proposed scheme, on our opinion, can be regarded as a way of resource theory apply, so as the use of appropriate methods of identification and estimation of core competencies, dynamic capabilities, organizational routines – on the one hand and other the subcomponents of intellectual capital (human, client, networks, innovation and process) – on the other. Correct identification of the value of intellectual capital and intellectual resources is considered as generally recognized problem that can be solved on the basis of proposed approach.

In turn, the intensive formation, accumulation and use of intellectual capital create for the enterprise the system of sustainable competitive advantages that became into market dominant source of its development. The dominant position of intellectual resources in the enterprise development necessitates the establishment of a functional relationship between the types, quantity, quality, business intelligence and competitive advantages. Consistent coordination of staff to accumulate a set of intellectual resources is also important in this case.

**Conclusions.** The researchers called the economy of the XXI century as knowledge economy where value is created not only by physical and financial resources so as by intellectual capabilities and intangible assets. This conclusion is fully confirmed by resource theory. This theory justifies a new vision of the determinants of successful strategic development defined a corresponding economic categories, where the main is intellectual capital. This is accomplished through implementation of the basic categories of resources approach – core competencies, dynamic capabilities and organizational routines in process of intellectual capital forming. This scientific and applied problem remains as actual topic in scientific literature.

References

2. Kalkalo V. Mesto i rol resursnoy koncepции v razvitii teorii strate-

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Fig 2. The relationship of the intellectual capital elements according to resource theory. Source:[6]
The article considers some of the problems of national insurance markets of Kazakhstan, Belarus and the Russian Federation in terms of integration associations of the Customs Union, the Eurasian Economic Community, activities of the Eurasian Economic Commission for future of EES. Presented the analysis of general indicators of the insurance markets that characterize the level of development. Based on a comparative analysis concluded conclusions and recommendations in order to ensure the competitiveness of the insurance market in Kazakhstan.

Keywords: insurance, the Eurasian Economic Space, the competitiveness, the national insurance market, insurance companies.

Statement of the problem. Integration processes of national economic systems of the three countries, Russia, Belarus and Kazakhstan, in the functioning of the Eurasian Economic Commission begin to form an active insurance relationship. Accordingly, there is a need for harmonization of market relations in the range of integration created a single insurance space. Harmonization of legal insurance will not be easy, because the level of each national insurance market is not the same, the legal basis, the regulatory environment, the factors of the functioning of markets differ substantially. The insurance market of a developing country's economy has always interacts with the external reinsurance market, it's a real inevitability of market mechanisms. Together with those of each national insurance market can not tolerate excessive openness to foreign insurers and abroad, which could reduce the competitiveness of national insurers.

Analysis of the latest researches and publications. Integration processes occurring in different parts of the world to facilitate the movement of goods and services that are relevant to the world of reality. Zone created by the integration of trade in various parts of the world economic territory, whether it is the countries of Eurasia, or the North Atlantic area of trade in Western Europe and the United States, or the ASEAN countries of Southeast Asia, will focus on creating trade advantages compared to other participating countries world trade, the conquest of markets for goods and services.

Research questions in the theory and practice of integration processes in the financial sector, including insurance and paid a lot of attention lately in the works of Adamchuk N.G. [2], Golysheva E.Y. [5] Lukinov A.I. [10] Sabitova G.M. [17] Kebekpaeva ZH. [9] Fayzullaev D.A. [23] Sarkisov S.E. [3.18], and others. In their researches, the authors, noting the positive role of integration, the need for harmonization in the field of insurance, do not take into account the inevitability of market competition, do not specify the forms and methods of approach to the organization of insurance business of the tariff policy, the uniform requirements of prudential standards and the capitalization of insurance companies, etc.

The main goals of research are the analysis of national insurance markets of the participating countries of integration associations, comparison of general indicators of market development in order to develop recommendations for the competitiveness of the Kazakhstan's national insurance market for the long term.

The main results of the study. The formation of the Common Economic Space (CES) to promote goods, services, capital and labor should create equal conditions and opportunities for the implementation of the national insurance market insurers participating countries. However, the association itself insurance markets into a single space should enable national insurance market of Kazakhstan to gain specific benefits, both in terms of promotion of insurance products, as well as in the expansion of the insurance business. The acquisition only promote freedom of insurance services in the Russian Federation and Belarus should not be considered as a criterion of success of Kazakhstan's participation in the insurance space CES. Must take into account the negative experience of the functioning of the Customs Union for the 2011 – 2012 years, when
the economic advantages of neighboring countries in promoting their own products were more effective. Problems of competitiveness of national security will be strengthened in the aspect of Kazakhstan's accession to the World Trade Organization (WTO), and the forthcoming entry into the Eurasian Economic Space (CES), created by Belarus, Kazakhstan and Russia. Begun preparatory work for the establishment of a common insurance market. The President of the Republic of Kazakhstan Nursultan Nazarbayev on October 17, 2012 signed the Law "On Ratification of the Protocol on the establishment of common insurance market of the EurAsEC countries", provides for the establishment in the capital of Kazakhstan and Russian missions to promote the expansion of integration ties.

However, the arrival of new insurers from the national market will create some difficulties for the operation of local insurance companies because of increased competition for market services for the client. However, it should be noted that, for any integration associations fully open national insurance markets do not exist. For example, there is a practice that in all the countries – members of the WTO established legislative rules that determine the conditions of foreign insurers and organizations with foreign capital. As a rule, foreign insurers receive in the national market conditions equal to that which appears to the local companies, providing them with equal terms with domestic insurers doing insurance business.

The processes of integration of markets will force each country to implement the state policy of insurance market development, taking into account national circumstances, the existing methods and machinery insurance. How will this happen in the integration of the Eurasian Economic Community, the Customs Union, the EEA is difficult to foresee, but to know the current state of the insurance market, the terms of insurance and regulation will be useful for specialists and experts.

On this basis, it is necessary to compare the state of the insurance markets of Russia, Belarus and Kazakhstan to form the conditions for the competitiveness of the national insurance market in the future.

The insurance market of Kazakhstan. As of January 1, 2013 in the insurance market of the country are 35 insurance companies, of which, 7 life insurance companies. The insurance market of Kazakhstan is developing steadily, demonstrating growth in key indicators over the past years. For almost 20 years of existence of the insurance market has formed quite an effective legal framework of national security, which is based on the European experience of insurance. Requirements for the organization of insurance activities, adherence to prudential standards and the level of capitalization of insurance companies, the organization of risk management consistent with the principles of European standards. Kazakh regulator is currently studying the possibility of introducing risk management as a method of Solvency II, the introduction of which the European supervision on insurance refused, because to postpone until better times in connection with the crisis in the economies of the European countries.

The Kazakhstan insurance market during 2012 saw further consolidation of the market, the number of insurers has decreased to 35. The total assets of insurance companies amounted to 2.95 billion USD, an increase of 14.2% compared with the data of 2011. Thus, the ratio of premiums to GDP increased slightly, to 0.67% [13]. Can be considered a positive growth of insurance premium per capital by 18.8%, to 83.03 USD. Total volume of insurance premiums in 2012 amounted to 1.41 billion USD compared to the amount of insurance premiums 1.17 billion USD in 2011 [7.20].

The insurance market of the Republic of Belarus. Main indicators of the insurance market in the Republic of Belarus for 2011 – 2012 years characterized as follows (Table 2). In the insurance market of the Republic of Belarus are 25 insurance companies, including 4 companies – pozhizioni. In Belarus, as well as in Kazakhstan, there is a division in the insurance 2 industry – insurance on risk species and a major life insurance company. Mostly Belarus is the state-owned Belgosstrakh. According to 2011 she collected almost half of the volume of insurance (49.2%), is licensed under a compulsory and voluntary insurance. A distinctive feature of the market is that companies besides Belgosstrakh, no one has insurance licenses required species, making the state-owned monopoly insurance market in Belarus. In the Republic of Belarus dominated by state insurance with a minimum of liberalization of the market in terms of the admission of foreign insurers shareholders of local companies. The Ministry of Finance of Belarus as a state organreguliruet relations in the field of insurance, shall pursue the policy of insurance activities.

Insurance companies in Belarus in 2012 the volume of premiums collected a total of $ 501.7 million compared to the year 2011 – 290.0 million. The share of insurance in the country's GDP for 2012 was 0.82%, in 2011 – 0.86%. The growth of premiums in comparison to the year 2011 amounted to 83.1%. [22] / For the 2012 payment of insurance for the whole country amounted to 29.3 million USD. The level of insurance payments in the total amount of insurance premiums for 2012 was 47.4% (in 2011 – 56.6%) [22]. The minimum size of the insurance companies in accordance with the Belarusian insurance legislation is set at 1.0 million euros for insurers on risk insurance, for life insurers – 2.0 million euros for reinsurers – 5 million euros. [1] In addition, the Decree of the President of the Republic of Belarus "On insurance activity" from August 25, 2006 number 530 was established reinsurance company "BelarusRe", which had a net worth of 116.0 million euros as of October 1, 2009, which significantly strengthens the market insurance and reinsurance Belarus [14]. In Kazakhstan, there is no state reinsurance company and, accordingly, each year financial resources of Kazakhstan's reinsurance premiums go abroad.

In order to develop the financial sector, the Resolution of the Government of Belarus on February 18, 2011 № 216 "On approval of the Programme of the Government of the Republic of Belarus for 2011-2015", whose main purpose is to create a competitive insurance market, including tasks which bring the level of the ratio of assets of the insurance sector to 2-2.5 percent of GDP in 2015 to liberalize the insurance market, creating a competitive environment, etc.

The insurance market of the Russian Federation. According to the Federal Service of Supervision of Financial Markets Service (FFMS), on December 31, 2012 in the Unified State Register of insurance entities of the Russian Federation registered 484 insurers, a year ago in the registry was 579. During 2012 the volume of collected insurance premiums amounted to 26,877.1 million, compared with 2011 growth of 21%, the payments – $ 12.3 billion U.S., excluding premiums for compulsory health insurance, and an increase of 21%. The share of the insurance market in the country's GDP in 2012 was 1.3% (previous year 1.2%). The average insurance premium per capita increased by 21.7% – up to 5.6 thousand rubles, or 186.4 USD. [12] One of the trends of insurance in Russia is the fact that in recent years the bulk of total insurance premiums insurers formed due to the volume of mandatory health insurance (MHI). For example, in 2011 the total share of total premiums MHI was 47.7% in total. The situation is similar
on insurance payments, the share of insurance premiums OMC in total insurance premium equal to 46.1%.

Insurance Supervisory Authority of the Russian Federation has been making strenuous efforts to tighten requirements for the regulation of the insurance market. In particular, since October 1, 2012 the supervisory authority of the Russian Federation establishes requirements to improve the equity of insurance companies from 30 million rubles to 120 million rubles. The measures taken by the Russian insurance market to increase the capitalization resulted in a reduction of existing insurers, one in 2012 with 96 companies left the market. Russian reinsurance market represented 12 special reinsurance companies as the "Capital Reinsurance", "National Reinsurance Company", "Moscow Re "Russian Reinsurance Company," "Transsiberian Re", "Megaruss Re", etc. For example, the reinsurer "Moscow Re'19 of march of 2007 had its own capital in the amount of 807.8 million rubles., or 26.9 million USD. [14]

To evaluate the efficiency of insurance markets, the level of competitiveness should now analyze the degree of influence of insurance at the macroeconomic state of the economy. In the Russian market with growth of the main indicators of the insurance companies on the basis of the payout ratio in 2012 remained at the level of 46%, as 3 year earlier. It was noted with concern the head of the FFMS of Russia Dmitry Pankin said: "Why insurance is such a small percentage of the country's GDP? If a person has made the ruble insurer and got back 46 cents, all this shows that the industry must realign it to start paying customer "[12]. From the point of view of the supervisor Russian insurance business does not perform effectively its social mission.

For a comparative analysis of the insurance market to make the calculations of some indicators of security of Belarus, Kazakhstan and Russia for 2011-2012. (Tables 1 to 4). According to the Russian insurance market volume calculations are taken without OMS. Calculations conducted in USD on the date of January 28, 2013, based on the exchange rate, 30,045 rubles. For $ 1, 8630 BYR. For $ 1, 150.76 tenge per $ 1.

### Table 1. Macroeconomic indicators of Belarus, Kazakhstan and Russia for 2011-2012

<table>
<thead>
<tr>
<th>country</th>
<th>Number of insurance companies</th>
<th>The volume of insurance premiums million</th>
<th>Insurance share in GDP,%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belarus</td>
<td>25</td>
<td>290.0</td>
<td>0.67</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>38</td>
<td>1169.2</td>
<td>0.67</td>
</tr>
<tr>
<td>Russia</td>
<td>579</td>
<td>22093.7</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Calculated according to [20, 13, 7, 21, 8, 19, 11, 4].

### Table 2. Indicators of insurance claims in the insurance markets of Belarus, Kazakhstan and Russia for 2011 – 2012, in%

<table>
<thead>
<tr>
<th>country</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The payoff amount, $ billion</td>
<td>payout rate in volume in%</td>
</tr>
<tr>
<td>Belarus</td>
<td>0.155</td>
<td>36.2</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>0.287</td>
<td>23.2</td>
</tr>
<tr>
<td>Russia</td>
<td>10.12</td>
<td>45.7</td>
</tr>
</tbody>
</table>

Calculated according to [20, 13, 7, 21, 8, 19, 11, 4]

Analyzing the performance benefits can make the main conclusion is that insurance markets have low loss ratio compared to the developed insurance markets in which the loss ratio reaches (70-90%). In essence, the insurance mechanism in our countries do not become part of the social protection of citizens, organizations and businesses to the fullest. Accordingly, our markets have all the reserves to reduce tariffs on socially important types of insurance, the establishment of a fair amount of commission. It is necessary to have disappeared from the market and casual those insurers that operate for quick income and corrupt practices of dumping skhem. In this aspect will require deliberate policy of supervisory authorities to tighten the requirements and standards for the conduct of civilized activities.

In the insurance markets of the Eurasian Economic Space competitive conditions are extremely difficult, because in each of these countries there is a stable system of concentration and monopoly in the insurance prostranstve. As example, in Belarus the state of Belgosstrakh, the only company that has the license for all types of mandatory and voluntary insurance. It collects nearly half of total insurance premiums in the country. Other companies do not have a license for compulsory insurance. In Belarus, at the expense of the state monopoly of the level of concentration is high, so the share of the 10 largest companies in terms of insurance premiums for 2011 is 89.4%. [8] During 2012 no significant changes in the insurance market, there is a monopoly of government company "Belgosstrakh."

In Kazakhstan, the insurers affiliated with banks, 17 of the country's companies have the exclusive right to bancassurance, independent companies under various pretexts, are not permitted for insurance to commercial banks. Also, a significant sector of the economy of Kazakhstan is in submission and management of the National Holding "Samruk Kazyna" to that the insurance of large risks of national companies allow only a select circle of insurers. However, they are required to reinsure large risks insurance reinsurance company in Bermuda offshore, affiliated with the holding "Samruk Kazyna". State reinsurance company in the country to be created, which negatively affects the efficiency of the national insurance and reinsurance market. Kazakhstan's insurance market has increased the level of concentration of insurance premiums and insurance payments. The share of the top 10 insurance companies accounted for 73.6% of total insurance premiums [7]. The concentration of the Russian insurance business is also growing. Russia's 10 largest insurers collected over 2012 508.7 bln. or 62.88%, compared with 2011 premium or 57% of total fees of all insurers. Analogically, benefits of 9 largest companies for 2012 amounted to 232 billion rubles (total payments-369 billion rubles.), representing 62.87%, there is no data on the "Alfa Insurance" [16].
Table 3. The concentration level of 10 large companies in terms of volume of premiums of the insurance markets of Belarus, Kazakhstan and Russia for 2011 – 2012, in %

<table>
<thead>
<tr>
<th>country</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belarus</td>
<td>89.3</td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>50.5</td>
<td>73.6</td>
</tr>
<tr>
<td>Russia</td>
<td>57.0</td>
<td>62.92</td>
</tr>
</tbody>
</table>

Calculated from data in [21, 8, 16, 15]

The level of security in Belarus, Kazakhstan and Russia for 2011 – 2012 years, remains low (Table 4), a single account for 52.5 dollars to 186.7 dollars, which are much cheaper than in many countries of the world.

Table 4. Indicators of the level of security of Belarus, Kazakhstan and Russia for 2011 – 2012

<table>
<thead>
<tr>
<th>country</th>
<th>Insurance share in GDP, %</th>
<th>The share of insurance per capita in USD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2011</td>
<td>2012</td>
</tr>
<tr>
<td>Belarus</td>
<td>0.86</td>
<td>0.82</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>0.64</td>
<td>0.67</td>
</tr>
<tr>
<td>Russia</td>
<td>1.22</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Calculated according to [20, 13, 7, 21, 8, 19, 11, 4]

There are a number of reasons, both objective and subjective. Still remains an ineradicable fatalism, the mentality of citizens of post-Soviet period, the economy, ignoring the insurance mechanism. Lack of insurance culture instills a taste for not insuring risks that accompany a man and his environment throughout life, is the hope of our people, the idea for "maybe blow over by me." An important factor is the low purchasing power of the population, hence the low effective demand for insurance services. The appearance of a layer of wealthy citizens who have property interests, begins to encourage insurance, but there are still people in the Member States and EEA little, of course, do not seriously affect the level of insurance. We need to strengthen the role of supervisory authorities in the enlargement of the scope of insurance services, the formation of protective mechanisms involving insurance, do not get involved in the formation of budget funds only state structures, it is necessary to trust and encourage the use of commercial insurance schemes, it will be partially unloaded state budget. Necessary regulatory and supervisory authorities encourage the use of insurance in the economic activity of enterprises. The regulator should introduce and push insurance to the creation of new insurance products for major new risks such as catastrophic, aviation, space risks techniques, both legislative and economic incentives.

Conclusions. On based analysis of comparable material to the following conclusions about status of national insurance markets in the light of the integration process:

1. Insurance share in the gross domestic product GDP of Belarus and Kazakhstan are respectively 0.82% and 0.67%, which is lower than compared to Russia (1.3%), net of insurance OMS. Increase of share to 2.7% in Russia is provided by the volume of mandatory health insurance OMC in total insurance premiums which is 47.7%, almost half of the market volume.

2. Insurance coverage per capita in Belarus is 4.8 times less in Kazakhstan, 2.1 times less compared to the same period in Russia.

3. Insurance markets of the Eurasian space have low loss ratio compared to the developed insurance markets in which the loss ratio reaches (70-90)%. In essence, the insurance mechanism in the EEA does not become an integral part of the social protection of citizens and businesses to the fullest.

4. The concentration of the insurance market remains very high in Belarus, which is characterized by a state monopoly of Belgosstrakh, a large share of the concentration in Kazakhstan and Russia, which is associated with the monopoly of financial and bank holding associations.

5. Analysis of the activities of insurance companies shows that only one company in Belarus (Belgosstrakh) and 1 of Kazakhstan (company Eurasia) may be among the 25 major Russian companies in terms of collected premiums, reflecting the weak competitiveness of the national markets of these countries in case of expansion of Russian insurers in the local markets.

6. Insurance markets of national economies become more capitalized. The minimum level of equity of the insurer in the Russian Federation since October 1, 2012 is approximately 4 million USD, and the minimum level of equity Kazakh companies in the amount of nearly $ 6.7 million in force since 2011. The level of capitalization of the Belarusian companies with a minimum share capital of (1.0-2.0) million euros, is clearly lagging behind the competition in the Eurasian space insurance.

7. Reinsurance markets of Belarus and Russia act in a professional manner, have a considerable size of capitalization. In Kazakhstan does not exist specialized reinsurers with strong financial resources, which essentially shows the lack of competitiveness of Kazakhstan's reinsurance market as a whole.

8. Common characteristic disadvantages for the national markets of the EEA are: lack of segmentation of the national insurance market, a limited set of proposed insurance services; excessive orientation insurers for mandatory insurance, a high proportion of concentration and monopoly on national insurance markets.

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METHODOLOGICAL ASPECTS OF QUALIFYING ACADEMIC PAPERS PREPARATION

(IMPORTANCE OF SCIENTIFIC PROBLEMS, DEFINITIONS OF THEME, GOALS, OBJECTIVES, SUBJECT AND OBJECT OF STUDY)

Methodological aspects of qualifying academic papers preparation concerning definitions of its theme, goals, objectives, subject and object of study are analyzed with business risk serves as example. It is shown that the research should be based on the principles of modern but not postmodern methodology.

Keywords: academic paper, methodology, business risk.

Introduction. Economic science aims to modernize Ukrainian society with all its spheres. The Ukrainian Government put forward the goals of society modernization to rank Ukraine in the list of 20 most developed economies in the world and to achieve society cohesion on this ambitious path [1]. The fundamental processes of the capitalism-direction transformation of current socio-political system has not completed yet in Ukraine. Not only citizens, but also scientists are on the search for appropriate methodological tools to get knowledge of the new society. A drastic change of methodological principles in research occurred in social science, including economics, that appeared in the rejection of the Marxist dialectical approach to study economic process. The new approaches appeared instead – with distinct characteristics of postmodernist methodology of reality understanding and illogical identifications. Russian philosopher N.Shapiro sheds light on the problem of the methodological principles of modernism and postmodernism: “If the methodology of modernism is a certain type of knowledge, a methodological standards, than postmodern methodology is a negation of the normative type of methodology and is based on pluralism and anarchist methodology principles”[2]. Implementation the principle of “anarchist methodology and pluralism” in economic research is extremely detrimental to any branch of economics – from theory to applied disciplines. Quite disappointing picture of modern science emerges if to add to the conscious adherents to the scientific anarchism those scientists who hide their own helplessness behind the shield of postmodern methodology. It includes inability to solve the basic problem of the initial phase of preparation of any academic research paper, as doctoral thesis or scientific report.

Analyzing the connected processes of modernization of the Ukrainian economic and science, A. Chuhno (academician of the National Academy of Sciences of Ukraine) concluded that the cause of misunderstanding and distorted identifications is low scientific and theoretical level of modernization of publications of leading economics there are several areas of research issues that deal with the urgent problems of economic science and practice. Therefore the focus is on the problems of methodology in publications of leading economic...
mists. The authors who study this problem are M. Blaug [4], P. Krugman [5], A.Chuhno [6], A. Koen, James Harcourt [7], J. Hausman [8]. Another group of authors examines the issue of writing and preparing of qualified academic papers. The problems of scientific research topic choosing and its relevance, criteria for assessing the degree of novelty scientific output, criteria for determining the degree of scientific originality, the main differences between doctoral and master's dissertation are studied by A. Usher [9], L. Ponomarenko [10], Y. Surmina [11], A. Zosimov and V. Golik [12].

Nevertheless there are still some important unresolved methodological aspects of the scientific research implementation. Among them are urgent scientific problem's justification, objectives and goal setting, subject and object of qualification research determination.

The purpose of the article is to present: the logic of scientific problem's relevance, the identification of research topic, objectives and goal setting, subject and object of qualification research paper determination.

**Preparation of qualifying academic papers: main steps.** The main informational basics for the research topic selection are scientific passports in economics and universities strategic research plans which are produced in accordance to the main scientific research priorities identified by government agencies and reflected in the relevant documents. The main among them is the Law of Ukraine "On priority directions of science and technology development", which identified six priority directions till 2020. The first is related to economic research: "Fundamental Research on the Most Important Issues of Scientific, Technical, Socio-Economic, Socio-Political and Human Potential Development for Ukraine's Global Competitiveness Ensurance and Sustainable Development of Society and State" [13]. Priority scientific research directions are specified in the Resolution of the Cabinet of Ministers of Ukraine as a priority thematic research areas and scientific and technological development for the period till 2015 [14].

The main steps to identify the research publication's topic are:

- Step 1: to choose a viable research direction
- Step 2: to identify a research problem
- Step 3: to formulate the topic of scientific publication

Scientific direction is a substantial part of the scientific specialty which has its specific object and subject and is the basis for the scientific problem's selection. For example, in the scientific specialty "08. 00. 04 – Economics and Management" there are some research directions: Enterprise Management; Ownership and its Impact on the Company's Performance with its Forms and Ways to Implement in Business; Marketing and Logistics Activities of Business; Functional and Technology Management; Personnel Management etc.

After choosing a research direction in the scientific specialty researcher has to identify a scientific problem, which actually reflects the current economic problems. A scientific direction is, in fact, more general than a scientific problem, which reflects the relationship between certain phenomena and processes in a particular economic environment and reflects the object and the subject of research. Table 1 shows examples of the scientific problem's definition.

<table>
<thead>
<tr>
<th>Scientific specialty</th>
<th>Scientific direction</th>
<th>Scientific problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics and Management</td>
<td>Strategic, Tactical Planning and Operations Scheduling, Business Planning</td>
<td>Strategic Planning System</td>
</tr>
<tr>
<td>Economics and Management</td>
<td>Entrepreneurship as a social and economic phenomenon. Functional and Technology Management</td>
<td>Managing Business Risk</td>
</tr>
</tbody>
</table>

The final identification of the scientific paper topic is intended to comply such requirement as clear and brief topic identification.

Justification of the scientific paper relevance involves:

- selection of arguments and facts that prove its practical significance for the national or global economy;
- selection of arguments and facts supporting the practical value of scientific problem solving for involvement of Ukraine in global economic processes;
- justification for the importance of science development.

The main requirements for the selection of arguments and facts are their clear and concise definition. The ultimate goal of any scientific activity is a practical usage of the achieved output, so the main purpose of scientific papers in economics is proving its importance for the economy of Ukraine.

The logic of this argument is deployed as follows: 1) the identification of actually existing problems or opportunities of the national or global economy and forms of manifestation → 2) possible ways of solving problems or opportunities and highlight the value of the selected direction in solving this problem → 3) quantitative assessment of the output of research paper to develop a national or global economy.

To illustrate the problem there is a topic of the research of Doctor of Economics "Managing Business Risks in Ukraine." It is an urgent problem of the Ukrainian economy. The deployment of economic globalization is accompanied by an intensification of international competition; rapid spread of global financial and economic crisis; aggravation of global problems; increasing instability of the business environment, which leads to increased risk of business activity in the country. Besides there are depression dynamics in innovation activity, strong depreciation of capital goods, contradictory legal framework in Ukraine.

Possible directions of solution. Flexibility, stability and democracy in any economic system is provided by small and medium businesses development. The European Charter for Small Enterprises focuses on the statement that "small enterprises must be considered as a main driver for innovation, employment as well as social and local integration in Europe" [15]. In most developed countries small and medium-sized enterprises (SMEs, small and medium-sized businesses, SMBs) make up approximately 70-90% of the total number of enterprises today. For example, there are about 53% of SMBs in USA, 71.7% in Japan and there are about 50% of population working in such businesses in EU [16].

Extremely high risk is the main cause of weak development of small and medium enterprises in Ukraine. Owners and employees of SMBs have to study modern approaches of risk management to use all of the potential of SMBs. The study of business risk management at Ukrainian enterprises proves that only a small number of companies use some elements of risk management in its activities.

Quantitative assessment of the scientific output for the national economy. Implementing the risk management approach ensuring flexibility and sustainability of the national economy and attracting additional resources for the modernization of the economy.

The next substantive section of the "relevance" should reflect the output of scientific research paper for more effective participation of the country in global economic proc-

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**Table 1. Identification of research problem**

<table>
<thead>
<tr>
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<th>Scientific problem</th>
</tr>
</thead>
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<td>Entrepreneurship as a social and economic phenomenon. Functional and Technology Management</td>
<td>Managing Business Risk</td>
</tr>
</tbody>
</table>
ess. The risk reducing would allow SMBs to enter foreign markets, rapidly introducing innovative products that would have a positive impact on strengthening the international competitiveness of Ukraine.

Validity of scientific research should be presented in the last part of the section. This section should briefly summarize the current scientific achievements on a particular issue in the foreign and national science. The leading researches in this area and unresolved issues should be also considered in this part.

The relevance of scientific problem does not depend on only national or global economic problems but on the existing opportunities. In this case, the argument should be built on possible variations to maximize the realization of opportunities.

The purpose of scientific paper is to obtain scientific and practical output to solve scientific or applied problems (for doctoral thesis) or practical problems (for candidat thesis). The scientific problem in economics reflects difficult economic processes and phenomena to investigate unknown scientific and practical output by applying new methodological research principles. Methodology is a system of methods and principles regarding research object in order to generate new knowledge (categories, laws etc.) and their usage in practice to solve the economic problems. Scientific problem in economics also reflects economic processes and phenomena, requires research to generate new knowledge through the usage of existing methodological research principles. The "Order of the Award and the Academic Rank of Senior Scientist" provides clear criteria for the differences between doctoral and candidat theses. Doctoral theses "should include scientific terms and evidence-based output in a particular area of science that solve important scientific and applied scientific problem. The applicant is the subject of copyright". Candidat thesis should include new scientific reasonable output "that solve specific scientific problem which is essential for a particular field of knowledge"[17] and is carried out by researcher.

The purpose of research paper should include three substantive components:
- theoretical achievement of the problem;
- practical recommendations;
- real economic problem to be solved by researcher.

Examples of correct purpose statement are presented in Table 2. The information contained in the last column of Table is justified in the first part of the content relevance, reflecting the current economic problem.

Nevertheless there are lots of examples of incorrect purpose identification in scientific researches, when some components are not considered:
1) Justification of methodological and methodical principles and practical recommendations development for categories of expenses and costs usage in regulating economic relationship between agricultural enterprises (the 3rd component is not considered);
2) Identification of methodological and methodical principles and practical recommendations aimed to improve marketing management in the mechanical engineering companies (the 1st and the 3rd components are not considered);
3) Development of scientific and methodological foundations of marketing geography and ways of its practical usage identification (the 3rd component is not considered).

<table>
<thead>
<tr>
<th>Table 2. Components of the scientific research purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scientific research topic</strong></td>
</tr>
<tr>
<td>The purpose of research</td>
</tr>
<tr>
<td>Theoretical output</td>
</tr>
<tr>
<td>Practical output</td>
</tr>
<tr>
<td>Solving problem</td>
</tr>
</tbody>
</table>

**Specific objectives** are formulated to achieve the purpose of research.

Objectives should reflect the logic and structure of the research and apply theoretical developments and practical recommendations. There is no direct dependence between the number of research plan points and the number of objectives. One point may include several problems to solve but is however several points of plan include one problem to solve. The first part of thesis is devoted to theoretical foundations of certain economic processes analysis.

For example, for "Business risk management in Ukraine" the first part of thesis named "Theoretical Principles of Business Risk Analysis Management". This part consists of four items, the first is devoted to place and role of the risk management in general management system; the second one is devoted to nature and content of the business risk definition; the third one is devoted to evolution of theoretical approaches analysis of business risk management; the last part is devoted to review of modern concepts of business risk management. The role of risk management, business risk definition, evolution of theoretical approaches of business risk management and features of modern business risk management concept are studied in this part. This example describes a situation with more research plan points.

The most typical mistake in objectives identification is the same naming as for methods such as to analyze processes...... to explore definitions...... to study the functional elements, to consider opportunities...... to assess the impact...... etc. The words analyze, explore, study etc. describe methods of investigation, while objectives aim the final result to be achieved as an output of research.

Objectives have to be identified by expressions that mean the final result: detect, identify, summarize, elaborate, highlight, prove enhance, improve etc.

The objects in economic study are phenomena occurring in economics. Epistemological position describes phenomenon as the external features of objects, processes, their properties that are observed in the temporal and spatial dimension. Thesis can involve such economic phenomena, as processes and activities of economic agents.

The object reflects an economic reality with its specific features. The object research occurs in a certain period of time and in a specific economic area.

The subject is a part of the object of research, the one of its unexplored part, that is much more specific. The subject reflects a scientific problem, so its definition includes all requirements imposed in scientific problem’s identification. The informational base for subject’s identification is current foreign and domestic publications analysis, where scientific and practical output is not solved yet. Examples of the object and the subject identification are demonstrated in Table 3.
### Table 3. Identification of the topic, the object and the subject of research

<table>
<thead>
<tr>
<th>№</th>
<th>Scientific research topic</th>
<th>The object of research</th>
<th>The subject of research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Diversification processes in confectionery companies in Ukraine</td>
<td>Production and economic activity of confectionery companies in Ukraine</td>
<td>Theoretical, methodological and organizational principles of diversification processes in confectionery companies in Ukraine</td>
</tr>
<tr>
<td>2.</td>
<td>Small and medium-sized enterprises in China as a part of international business</td>
<td>International economic activities of Chinese small and medium-sized enterprises (SMEs) in global market</td>
<td>Theoretical, methodological and practical recommendations on the priorities of SMEs in global market activity and foreign trade risks</td>
</tr>
<tr>
<td>3.</td>
<td>Business risk management in Ukraine</td>
<td>Ukrainian small and medium-sized enterprises (SMEs) activity</td>
<td>Business risk management</td>
</tr>
</tbody>
</table>

The most typical mistake in the object and subject identification is reducing the objects scope to the subject. For example, "The object of the research is marketing risk in engineering companies activity" and "The subject of the research is theoretical and methodological principles of economic evaluation and risk management of marketing activities of the domestic machine enterprises." In this case the object is broader than the subject and the object is an activity of engineering companies in Ukraine. And the subject describes risk management assessment.

Here is another example. "The object of study is marketing management of machinery enterprises" while "The subject of the research is theoretical principles and marketing system of machinery enterprises". In this case the subject and the object are different variations of the subject. And the object is the marketing activity of machinery enterprises in Ukraine.

### Conclusion

A prerequisite for successful preparation and subsequent defense of the research's output at the Academic Councils is methodologically correct and coherent justification for the research topic, identifying goals, objectives, the subject and the object of scientific qualification. Experience shows that if the supervisor (in the case of a candidate thesis) and doctoral are able to articulate the purpose, the subject and the object of the thesis, then researcher is able to successfully archive his goal.

For that to be done, firstly the research should be based on the principles of modern methodology involving compliance of certain logic topic's goal, objectives, the subject and the object of the research. Secondly, the logic of researcher's justification should be met. Thirdly, the main components should be analyzed while the scientific research's identification: theoretical and practical output and the solving problem. The last one is to separate the object and the subject of scientific research.

### References


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### МЕТОДОЛОГІЧНІ АСПЕКТИ ПІДГОТОВКИ КВАЛІФІКАЦІЙНИХ НАУКОВИХ РОБІТ (АКТУАЛЬНІСТЬ НАУКОВОЇ ПРОБЛЕМИ, ТЕМА, МЕТА, ЗАДАННЯ, ПРЕДМЕТ ТА ОБ’ЄКТ ДОСЛІДЖЕННЯ)

В статті розглядаються методологічні аспекти підготовки кваліфікаційних наукових робіт, пов’язані із обґрунтуванням актуальності наукової проблеми, формулюванням теми, мемети, завдань, предмету та об’єкта дослідження. Показана необхідність використання принципів методології модерн, які передбачають дотримання певної логіки обґрунтування теми, визначення мети, завдань, предмету та об’єкта наукового дослідження. Для демонстрації висунутих положень в якості прикладу використано дослідження підприємницьких ризиків.

Ключові слої: кваліфікаційна наукова робота, методологія, підприємницькі ризики.

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В статті розглядаються методологічні аспекти підготовки кваліфікаційних наукових робіт, пов’язані із обґрунтуванням актуальності наукової проблеми, теми, ціллю, завданням, предметом та об’єктом дослідження. У такому випадку використовується принцип методології модерн, що допомагає обґрунтувати тему, визначити мету, завдання, предмет та об’єкт наукового дослідження. Для демонстрації висунутих положень в якості прикладу використано дослідження підприємницьких ризиків.

Ключові слої: кваліфікаційна наукова робота, методологія, підприємницькі ризики.
INTEGRATION AND NETWORKING MECHANISMS OF PROMOTING SCIENTIFIC AND INNOVATION ACTIVITY IN THE HIGHER EDUCATION SYSTEM OF KAZAKHSTAN

The article considers the theoretical and practical issues of development networking integration forms of the universities in the innovation sphere on modern stage. It is established that participation of the Karaganda Economical University of Kazpotrebsoyuz in networking educational and scientific consortia allows expanding a circle of partners and a range of opportunities for intensification of scientific-innovative activity in the future.

Keywords: scientific and innovation potential of the University, integration of science and higher education, networking universities.

Statement of the problem. The priority attitude of the state to the development of science has had a strong and deep cumulative effect for several decades: the strengthening of the state positions in science and technology sphere it was changing the traditional mechanisms of the cooperation in different sectors of the national innovation systems (NIS), the role of science in the socio-economic development [1].

A new trend in the same direction is the strengthening scientists' activity commercial character and structures that was created by them, which was shown up last twenty years. If earlier the equal significance of the information, advisory, educational services that provided by professors mostly on a contractual basis, but now more often, scientists themselves participate in the creation of companies, in direct investments in business. Professor, who made his own business and uses students and post-graduate students in science-intensive company work, is a very widespread phenomenon.

Appreciable "antreprenisation" of the research activities in universities became possible due to the removal of most of the bans on patenting of scientists from the universities the results of research studies carried out as a result of budget financing; long-term positive development of the stock market in the second half of the 90s and especially favourable dynamics of the market value in high-tech companies; a large number of examples of real commercial success of small science-intensive companies.

But this is a world tendency, and in science structure of the Republic of Kazakhstan remains extremely low share of universities which are executed in researches and development (about 5% of expenditure on science, compared with 21% in the EU and 14 – 15% – in Japan and the USA). It should be noted that new private universities almost don't conduct researches, and state universities are occupied in competition with private system of education in attracting students in Kazakhstan. At the end of last century there was the integration of some of the state universities and research organizations, which led to the degradation of such organizations. Also in big state universities in recent opening so-called "innovation centers and centers of the commercialization", who are not only engaged of the development of innovative activity of universities, but do not understand their mission. Continuation of such trend may lead to irreversible consequences for both to the science and to the quality of training.

Kazakhstan science has poor innovation orientation [2]. Market failures in innovation sphere is explained not only and not so much by the crisis in the national economic system, but discrepancy of the themes of the researches, institutional structures and mechanisms of functioning of science to the needs of the economy. Even in the conditions of the investment growth since the beginning of 2000 till present day, a significant inflow of investments to the enterprises in scientific sphere is not observed, but at the same time, according to our estimates, more than half of solvent demand for the technology is covered by import.

Analysis of last researches and publications. Theoretical and practical aspects of innovation activity in the higher education system in the world, including in Kazakhstan were discussed in the publications of Russian and foreign scientists Hodzhson J [3], Castells M [4], Strelec I.A. [5], Rozanov N., E. Savitskaya [6], M. Yudkevich [7], S. Mamontov [8] and others, however, questions of the development of cooperation and networking of universities are not considered now.

Determine of earlier parts of common problems. Because the national innovation system in Kazakhstan unbalanced today; its main elements – scientific and technical sphere, universities, enterprises, innovation infrastructure – exist in isolation. The strategy of the industrial sector in uncertain economic situation in country is not focused on innovation development today, using the results of domestic researches. The level of innovation activity in industry, even of the investment lifting 2007-2011 do not exceed 4.5% [9] compared to 51% on average in the EU countries. However, the autarchy of the system of higher education and industry can not last long, because the available scientific and technical base wears out quickly. University science in its present form is not able to effectively interact with industry and respond adequately to the needs of the economy.

Involvement of scientific developments in the economic turnover hampered by unresolved problems of the distribution of intellectual property rights, the underdevelopment of the market for technologies and information services.

The purpose of the research is integration and network mechanisms of activation of scientific-innovation activity in the higher education system of Kazakhstan consist in researching priorities of industrial-innovative development, mechanisms of enhance innovation capacity of universities as key participants in the national innovation system.

Main results of the study. At the same time, reforms in innovative-industrial development sphere did not become a stimulus for activation of University science. The existing model of functioning of the economy differs by its internal mechanisms of self-development and inertia, unfavorable for scientific-technological and innovative development of the higher education system. If such trend saves university science and high-tech industries will have irreversible degradation which have an important mission to ensure accelerated industrial-innovative development of Kazakhstan.

Thus, necessary of researching to the adequate conditions, of the organizational-economic mechanism of development of University science in Kazakhstan, aimed on inclusion of the higher education system in the national innovation system has become a priority for the formation of the "new economy".

When science was reforming it was insufficiently such fact that it is one of the most inertial sectors of the economy. Forming and subsequent operation of scientific potential impact several generations and include training in secondary and high schools, training the scientific staff in post-graduate study, accumulation of knowledge, the systematic

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High level of integration of higher education and science is the Association between the scientific institutes, universities with manufacturing companies, enterprises, scientific and technological parks. Such large associations can serve large economic organizations, corporations, holdings, transnational companies, providing them with a range of educational, research and other services. It is very popular abroad the creation of such large complexes, which are called multiuniversities. They are university production centers or intellectual cities, which play a crucial role in the development of specific regions.

An important stage of the innovative development of the system of higher education in Kazakhstan and ensuring its competitiveness is the introduction of online universities cooperation. It is connecting with the fact that in modern conditions the traditional division of the economy into sectors or the industry loses its operationality and come first clusters – system network linkages of firms and organizations, the significance of which as a whole exceeds the simple sum of its parts. Network or cluster model of innovation development in national system of high education is well implemented, it can cardinally change the content of the educational and scientific-innovative policy of the country, through the removal of constraints on growth of efficiency and technological innovation.

Understanding the network of philosophy in the world community is growing rapidly, and networks become the key component of national and regional economic development plans.

In connecting with the active position in competitive market of higher education, actualizes the importance of the ability to consolidate efforts with other dynamic educational institutions, to be ready to operate in network structures, in which each member of the network complements each other and increases the efficiency of the whole network. Last decade due to globalisation and the excessive development of information and communication technologies competitive pressure on the market of educational services grew so strong that any higher educational institution may not be enough confident in long-term prospects of its development.

In such conditions the most optimal variant for securing and improving the competitiveness of universities is network structures of interaction. It is the network structure plays a leading role in formation of policy formation and growth of the economy knowledge in countries of all continents, of course, most of all to the greatest extent in industrialized countries. Network structures give an opportunities to provide knowledge transfer and innovation in universities and institutes in the countries with economies in transition.

As the main motives of creating the network structures in higher education spheres can be mentioned:

- development and active implementation of high technologies;
- increase of innovation and economic activity on the territory of the network operation;
- possibility of cooperation and reducing transaction costs of the network participants;
- to maintain and increase the competitiveness of the network participants;
- preparation of highly skilled and demanded specialists.

Summarizing world experience of development of network and clusters structures almost in all spheres of the economy, that can told that they gave a significant impetus to innovative development of the national economic system. In network structures instead of rigid specialization in the form of single-industry organizations-participants is developing the so-called flexible specialization, the ability to innovate. In these quality network structures are based on the hidden redistribution of knowledge and interdiscipli-
nary exchange of information characteristic of the innovative-educational networks.

What about innovation motive formation of network structures of universities, summarizing the international experience of development of innovation activity in the countries of Western Europe, USA and Japan, we can notice the trend of such institutional and management structures for the development and implementation of innovations, which are characterized by the concentration of basic research, mainly in higher education sphere. However, in Kazakhstan the main resource potential for the creation of innovations for production have traditionally shaped and active fixed for applied research institutes and academic institutions.

Development of scientific and innovation potential of the universities of Kazakhstan universities should not break this tendency, but to bring universities from the level of simple educational organizations to the level of research and innovation, through the creation of network interactions with the research institute, with universities, with state and regional development institutions and corporate structures.

As a good example of the formation of the network interaction on the basis of international and national relations of a higher educational institution we can notice our Karaganda Economical University of Kazpotrebozuyz, which is a member of several international and regional organizations, particular: International Association of Universities, International Association of Universities, the Association of educational institutions Educational Network (EdNet), the Council of cooperative Universities of the CIS countries, the Association of Justice Universities of the Russian Federation.

Development of networking multiplicative signed in 2006, in Bologna (Italy) Great Charter of European Universities and the official acceptance with of the principles of the Bologna process allowed to start active development of cooperation with international organizations, funds and their representatives in Kazakhstan, in particular, with the German academic exchange service DAAD, French Alliance, Informational-educational Center "Bilim – Central Asia", "Education First Academic programs", "Kazakhstan Council for Education Trave", "CCUSA Kazakhstan", AIESEC successfully realizes the programs of the European Union Erasmus Mundus and Tempus, that also involve the combined universities in the original network, consortia for the implementation of specific projects. Particularly, the program Tempus (TRANS-European mobility scheme for higher education) is a European Union program aimed at supporting the modernization of higher education on the basis of cooperation between universities independently from external influence, in the framework of country-driven consortia.

Cooperation and mobility program of European and national Universities Erasmus Mundus is built on the basis of cooperation among European universities in according to the interests of the students of all countries of the world.

In recent years participating in the network of educational and scientific consortia, work on projects and programs enabled to the University in recent years to expand the circle of partners, and to expand the range of opportunities for learning and personal growth of teachers and staff. Presently, on the basis of long term contracts KEUK develops cooperation with 40 universities from 12 countries: Austria, Germany, South Korea, Poland, the Czech Republic, Hungary, China, Turkey, Russia, Ukraine, Belarus, Uzbekistan. There are strategic partners of the foreign universities:

1) Anadolu University (Turkey)
2) University of Applied Sciences. Janos Kodolany (Hungary)
3) Graduate school of entrepreneurship (Germany)
4) University of Applied Sciences Carinthia (Austria)
5) International business school Solbridge (South Korea)
6) Euro school Bitterfeld-Wolfen (Germany)
7) Kiev national University named after Taras Shevchenko (Ukraine)
8) Moscow State University named after Mikhail Lomonosov (Russia)
9) Saint-Petersburg State University of information technologies, mechanics and optics
10) National research University – Higher school of Economics (Russia)
11) Moscow state University of Economics, statistics and Informatics (Russia)
12) Belarussian state University (Belarus)
13) Financial Academy under the Government of the Russian Federation (Russia)
14) Russian State tax Academy (Russia)
15) St. Petersburg State University (Russia)
16) St. Petersburg State University of Economics and Finance (Russia) and others

Real and perceptible educational results bring participation of the University in the Network University of the Shanghai cooperation organization, in which the KEUK is includes one of the basic universities from Kazakhstan in the field of "IT-technologies". Partners of KEUK network are the leading Universities of the countries of the Shanghai six – Russia, China, Kyrgyzstan, Kazakhstan, Tajikistan and Uzbekistan.

Presently in the framework of the University of the Shanghai cooperation organization is implementing the program of dual master's degree in information technology sphere, which is being attended by 20 students. While the program is being implemented with Russian Universities – St. Petersburg State University of information technologies, mechanics and optics, Astrakhan State University, Novosibirsk State University, but in the future, as the project is supposed to implement programs diploma education with other countries of the SCO.

Conclusions from this research and prospects of further development in this direction. In General, from the point of view of activization of innovative activity creation of a network of universities interaction also has a lot of advantages. It allows to:

- attract foreign scientists to the research projects on the territory of Kazakhstan;
- expand the number of participants of grant funding research projects through the network;
- reduce the duration of the innovation cycle due to the phasing of the research project among network participants;
- to create conditions for the exchange and transfer of knowledge in the innovation system.

As prospects of further expansion of interaction between universities can offer development on their basis of educational innovation complexes and zones, representing a network of cooperation, consisting of not only universities, but also research institutes, scientific centers, consulting and training companies, oriented at training of skilled labour and the generation of new ideas and developments.

Such educational and innovative developments should be focused on the deployment of innovative infrastructure in the regions, where the policy development and attraction of qualified human resources (including foreign ones), as well as technology transfer.

References
NATURAL PROPERTY RELATIONS AND ITS ROLE IN A PUBLIC REPRODUCTION

Article is devoted to theoretical analysis of nature and structure of intellectual property relations. Types of intellectual property relations and its role in public reproduction are investigated. Peculiarities of intellectual property relations are considered. Two groups of approaches to classification of intellectual property objects are analysed: classification of objects depending on its characteristics which is based on the analysis of their most essential features, specificity of their protection, features of realisation of the property and non-property rights; classification on the basis of various minor criterions which do not reveal nature and character of objects but at the same time allow to divide them into groups according to concrete tasks of research. Necessity of defining of incorporeal objects of intellectual property which cannot be labelled as objects of copyright, industrial property or branding tools is proved. Criteria of classification of party’s to intellectual property relations are investigated. The subject structure of intellectual property relations according to the legislation of Ukraine is defined. New approaches to classification of party’s to intellectual property relations depending on their role in relations of intellectual property and their economic functions are offered, which allow to embrace as much as possible all participants of intellectual property relations, consider their role in the process of commercialisation, and draw attention to subjects which carry out regulating and mediatorial functions on the intellectual property market.

Keywords: intellectual property relations, classification, objects and subjects of intellectual property, copyright, industrial property.

Introduction. Property relations form basis of any economic system, providing possibility of realisation of economic interests of the owner in social production, and also forming the mechanism of distribution of its results. While the essence of the property was investigated by Aristotle in IV c. BC, intellectual property relations has turned to object of scientific researches only in XIX c. Nowadays scientific discussions arise among researchers concerning structure of intellectual property objects, rating different results of intellectual activity as intellectual property objects, and also concerning division of party to intellectual property relations into groups by different criteria.

At the present stage of development of productive forces and formation of a postindustrial society, intellectual property relations turn from sphere of realisation of human potential to a basic source of social and economic development of the nation. In particular, according to the World organisation of intellectual property in 2011 the contribution of intellectual property branches to GDP of the USA was over 1 billion. That in 7 times exceeds a current CDP of Ukraine.

Objects of intellectual property are used in different spheres of economic activities, provide manufacture of innovative products, promote development of sphere of services and increase profitability of enterprise activity. Genesis, development, complication and a variety of intellectual activity occurred together with evolution of a human civilisation. Lately under formation of a postindustrial society an intellectual property relation turned to an important component of social and economic basis of a society, and objects of intellectual property turned into defining factor of a social reproduction.

During the Middle Ages intellectual activity was considered only as realisation of creative and a mental potential of the person, means of creation of a variety of leisure of the person and cultural life of a society. Besides, the sphere of services where the basic role belonged to intellectual activity, was considered unproductive in economic sense. In XX c. when the sphere of non-material production gradually starts to prevail over production of goods under the contribution to gross national product, and the share of...
the intellectual capital in structure of actives of the enterprise incessantly grows, intellectual activity has received considerable stimulus to development, and together with it the nomenclature of intellectual property objects essentially extends. All of it causes necessity of the analysis of peculiarities of different objects and subjects of intellectual property, their division into groups for the purpose of maintenance of effective protection of the property and non-property rights of subjects of intellectual activity, and also working out of effective mechanisms of commercialisation of different intellectual property objects of. Thus, the urgency of research of intellectual property relations is defined by specificity of a postindustrial stage of civilization development which transforms the intellectual capital into a basic component of productive forces of a society. The maintenance and the basic theoretical principles of intellectual property have been considered in the economic and legal literature. The appropriate place in working out of this scientific research area belong to Bazylevych V., Dzortsev V., Sergeyev A., Svyatotsky O., Orlyuk O., Drobyazko V. and others. At the same time, the questions concerned research of different theoretical approaches to the analysis of structure of intellectual property relations, classification of objects and subjects of intellectual property, definition of a role of intellectual property in public reproduction, in our opinion, remain partly undiscovered.

The purpose of the article consists in research of structure of intellectual property relations, serious consideration of conceptual approaches to classification of objects and subjects of intellectual property relations, definition the role of intellectual property relations in modern economic system.

Main body. Intellectual property relations are form of economic relations of the property and consequently certain tendencies of their development will completely be coordinated with modern directions of transformation of property relations. Complication of intellectual property relations and division of intellectual property rights predetermines increase in quantity of intellectual property subjects and rise level of transaction costs in economy. Noted tendency has received an extended coverage in the new institutional theory. Division of intellectual property demands careful specification intellectual property relations and effective mechanism of their legal regulation.

Intellectual property relations are system of social and economic relations which arise concerning appropriation and commercialisation of intellectual activity results. Commercialisation of intellectual activity results is a system of procedures concerning their introduction in economic overturn for the purpose of creation of the added value and generating of additional profit. Involvement of intellectual activity results in the sphere of relations of appropriation-alienation turns it to intellectual property objects. At the same time, in the process of commercialisation an intellectual property objects turns into major factor of production.

The structure of intellectual property relations includes: types of intellectual property relations, subjects and objects of intellectual property relations.

In our opinion there are several types of intellectual property relations:

- Relations of appropriation of intellectual activity results in the way authorised by a society;
- Relations of commercialisation which arise concerning introduction of intellectual property object in economic overturn for the purpose of profit reception;
- Relations of usage of intellectual activity results which provide cession of intellectual property rights to other persons on different conditions and in different volume;
- Relations of possession which provide actual domination of the party to intellectual property relations over intellectual activity results that directly and indirectly is not connected with its use.

It is necessary to notice that different kinds of intellectual property relations can integrate in different combinations in economic activities. Thus, intellectual property relations, being a kind of economic relations of property, own both the general patrimonial traits, and distinguishing features:

- The intellectual property right is the sole right that arise from the law, and not from civil agreements;
- The intellectual property right is limited in time and space, that is protected during certain term and in certain territory;
- The overwhelming part of intellectual property objects demands the state registration for effective protection of corresponding intellectual property rights;
- Intellectual property objects are inexhaustible, that is they do not wear out and do not lose characteristics as a result of long use. At the same time, they are subject to an obsolescence and can lose an urgency as a result of scientific and technical progress;
- Intellectual property objects are non-material by the nature but stored on the material carrier;
- The property on intellectual property objects directly is not connected with the property on material objects in which they are embodied;
- As a result of non-material character intellectual property objects are inalienable, therefore within the limits of the order only intellectual property rights is alienated;
- Indispensable condition of granting of legal protection to intellectual property object is novelty (originality), and also their embodiment in the certain objective form;
- Intellectual property objects grow out of art, scientific, literary or technical intellectual activity of the person and consequently always have creative character;
- Intellectual property objects thanks to the non-material nature can be easily duplicated and consequently demand special legal, technical and organizational protection.

Considered above feature of intellectual property relations transforms them into an especial kind of relations of the property to which it is difficult to apply traditional approaches of the political economic analysis. For this reason nowadays intellectual property relations represent a separate kind of relations of the property which is regulated by separate institution of civil law.

As it was marked above, under formation of a postindustrial society the intellectual property relations start to play defining role in a social production. In our opinion, it is connected with those functions, which carry out intellectual property relations (further – IPR) within the limits of a public reproduction.

First, IPR provide distribution of results of a social production between all party to relations of appropriation of intellectual activity results: the subject of intellectual activity receives the income, the investor who puts means in commercialisation of intellectual property objects, receives percent on the invested capital, the state – receives tax revenues in the budget, the enterprise – receive the additional value created on the basis of use of the intellectual capital.

Secondly, IPR accelerates scientific and technical progress providing redistribution of a part of public product for benefit of creators of an intellectual product, stimulating them in such a way to the further intellectual activity.

Thirdly, IPR predetermine an innovative orientation of a social production and modernisation of economy on the ground of introduction of intellectual activity results in economic activities.

Fourthly, IPR modify class structure of a modern society therefore within the limits of economy the role of tech-
nocrats, representatives of branch of science and education who are engaged in intellectual activity, carriers of knowledge and creators of an intellectual product are significantly growing. The first law concerning intellectual product is the property of its author therefore not rise prices for its product. According to norms of patent law the author could deprive of privileges if he unreasonably authors of new inventions in an industry within 14 years. Thus cancelled all existing privileges and monopolies and thus of Republic Venice and had industrial suitability, has been property rights of the author of such object of the industrial property as the invention, if it was original, new in territory property as the invention, if it was original, new in territory. From the beginning of origin of intellectual property right two groups of intellectual property objects were allocated: copyright objects and industrial property objects. In the Charter of Republic Venice accepted in 1474, possibility of the protection of moral and sole property rights of the author of such object of the industrial property as the invention, if it was original, new in territory of Republic Venice and had industrial suitability, has been fixed. The Charter about monopolies accepted in Britain cancelled all existing privileges and monopolies and thus left for the monarch the right to give privileges only to authors of new inventions in an industry within 14 years. Thus the author could deprive of privileges if he unreasonably rise prices for its product. According to norms of patent law accepted in 1791 in France by the board of the revolutionary government any opening or the new invention in any branch of industry is the property of its author therefore not to consider the industrial invention as the property of its creator is a restriction of human rights.

Accepted in 1709 in Britain the Charter of Queen Anna established exclusive property rights of authors of literary works on results of they creative activity. Noted property rights were protected within 14 years and this term could be prolonged by author for 14 years remained. The author could dispose freely of the right to copy the product or to transfer this right to the publisher. From here subsequently "the copyright" concept come into existence. In France two decrees in which "copyright" concept has been used for the first time have been accepted by the board of the revolutionary government: Decree about the performing right and execution drama and musical product in 1791 and Decree about the property right of authors of literary works, composers and painters in 1793 which established protection of property copyrights during life of the author and 10 years after his death. Thus, in the end of XVIII c. terms "industrial property" and "copyright" were actively applied both in Europe, and in the USA.

In XX c. from copyright separate the related rights. For the first time at national level the related rights receive legislative regulation in the law on the copyright of Austria 1936 In 1941 in the copyright law of Italy for the first time the term "related" right is applied, and in 1961 the International convention on protection of the rights of executors, manufacturers of soundtracks and the on-air broadcasting organisations is accepted. At the end of XIX c. – at the beginning of XX c. individualization tools become object of legal regulation. The first law concerning protection of the trademark is accepted in France in 1857, in Italy – in 1868, in the USA – in 1881, in Germany – in 1894, in Britain – in 1883 In 1919 in France first in the history special law in sphere of geographical Indications regulation is accepted. Besides, in second half of XX c. untraditional results of intellectual activity become object of legal regulation: trade secret, know-how, scientific discovery, results of selection activity, configuration of integrated microcircuits, rational proposals. Thus, next to copyright and the industrial property objects the new groups of an individualization tools and untraditional objects of intellectual property are arise.

It is necessary to notice that today, the legislation does not contain criteria of classification of intellectual property objects (further – IPO), and only defines them. According to Convention on creation of the World organisation of intellectual property signed in 1967, objects of intellectual property embrace: literary, art and scientific products; execution, sound recordings, on-air broadcasting transfers; inventions in all fields of activity of the person; discoveries; industrial samples; trade marks, service marks, company names and commercial designations; protection against an unfair competition; all other rights which concern intellectual activity in industrial, scientific, literary and art spheres. At the same time, according to norms of TRIPS IPO include: copyright and related rights, trade marks, geographical indications, industrial designs, patents, configurations of integrated microcircuits, protection of trade secret, control over practice of anticompetitive actions in contractual licences.

According to article 420 of the Civil code of Ukraine objects of intellectual property embrace: literary and works of art; computer programs; databases; execution; soundtracks, videogram, on-air broadcasting transfers; discoveries; inventions, utility models, industrial designs; configuration of integrated microcircuits; rational proposals; grades of plants, breeds of animals; commercial names, trade marks, geographical indications; trade secrets [8].

In our opinion, all approaches to classification of IPO should be divided conditionally on two groups: 1. Classification of IPO depending on its characteristics which is based on the analysis of their most essential features, specificity of their protection, features of realisation of property and non-property rights; 2. Classification of IPO depending on various minor criterions which do not reveal nature and character of IPO but at the same time allow to divide them into groups according to concrete tasks of research.

Let's consider approaches which belong to the second group. Depending on sphere of intellectual activity which has caused creation of IPO and their functional appointment, they can be divided on: results of technical, art, scientific activity, individualization tools.

Depending on necessity of registration for acquire of intellectual property rights it is possible to divide IPO on: objects, for which not provided registration possibility; objects for which registration has facultative character; objects for which registration carries a obligatory character. Depending on degree of legal security IPO can be divided on protected and unprotected.

Depending on use in economic overturn it is necessary to define productive or active IPO which are commercialised and bring income, and also unproductive or passive IPO which for these or those reasons are not commercialised and do not bring income.

Also among intellectual property objects we can sign out: absolute welfares which directly satisfy consumer or industrial needs and bring in direct income of commercialisation; relative welfares which indirectly satisfy consumer or industrial needs and bring in indirect income of commercialisation (for example individualization tools).

In addition IPO could be classified on formalized which it is possible to use right after their creations (objects of copyright and relative rights); non-formalized which at first need to be embodied in the certain objective form and only then to use (objects of the industrial property). Depending on quantity of authors IPO can be classified on: individual and created in the co-authorship. Depending on the objective of creation IPO can be classified on: objects created under own initiative, official objects, objects created to order. Depending on the owner of intellectual property rights
IPO can be divided on: individual, collective, state objects. Depending on possibility to allow using IPO it is possible to divide them on alienated and inalienable objects (geographical indications, commercial names).

Depending on sources of receipt IPO can be classified on: developed, inherited, received in qualities of a assessed contribution in authorised capital, received in time use on a paid basis. Also depending on degree of novelty IPO is possible to classify on: new, original, indirect. Depending on term of protection of the industrial property IPO is possible to classify on: IPO with the limited term of protection of property rights, IPO with unlimited term of protection of property rights. Depending on degree of liquidity IPO can be divided on: high liquidity objects, liquid, low liquidity objects. Depending on term of profitable use IPO is possible to divide on: current (short-term), intermediate term, long-term.

Concerning approaches which belong to the first group, opinions of scientists disperse. Kraynev P. subdivides objects of intellectual property on: objects of industrial property, objects of copyright and relative rights, trade secrets, protection against an unfair competition [3, p.25]. Sergeyev A. single out copyright objects, objects of patent right, other objects of intellectual property [5, p.20]. Bazylevych V. among objects of intellectual property single out: objects of copyright and relative rights, objects of industrial property, individualization tools of participants of a civil overturn of the goods and services [1, p.131]. Kiselyova J. divides IPO on: objects of industrial property (including individualization tools), objects of copyright, objects of relative rights [2, p.26].

In our opinion, the most lawful is division IPO on: copyright and relative rights objects, objects of industrial property, individualization tools, untraditional objects of intellectual property. After all individualization tools, objects of industrial property, copyrights and relative rights objects own important patrimonial features.

Objects of copyrights and relative rights belong to results of art-literary intellectual activity; registration of objects is not obligatory; property rights on noted objects are protected by the state during long term; copyright and relative rights extend only on the form of expression of intellectual activity result; a legal protection condition is originality, instead of novelty of product; protection is given irrespective of art level and art value of product.

Objects of the industrial property belong to results of scientific and technical intellectual activity of the person; their registration is obligatory; property rights on objects of the industrial property are protected by the state during rather short term; they should be suitable to use in the industry or other branch of manufacture; they form the basic part of intangible assets of the enterprises; objects of the industrial property can be embodied in plane or volume forms, products or processes.

Individualization tools in direct understanding do not belong to results of intellectual activity as their value is defined not by a creative payment, art or a product technological level, but depend on business reputation of the enterprise or region; their registration mainly is obligatory; property rights on individualization tools are continuously protected by the state; the intellectual property right on noted objects does not provide non-property right; they reduce uncertainty and carry out information function.

To untraditional IPO can be referred: scientific discoveries, rational proposal, grades of plants and breed of animals, trade secrets, know-how, configuration of integrated microcircuits. In our opinion, separate untraditional IPO – scientific discovery, rational proposal, trade secret, know-how, can be attributed to separate group of incorporeal objects. Noted objects, in a counterbalance to configuration of integrated microcircuits or selection achievement, represent the information in the pure state, they can concern any field of activity, do not demand registration and do not provide reception of any certificates.

Party to relations of industrial property (further – subjects of industrial property – SIP) take part in relations concerning appropriation of intellectual activity results. Active development of intellectual property relations determines attraction to participation in this relations growing quantities of economic subjects. Therefore necessity of profound discovery of a circle of participants of intellectual property relations does not lose an urgency.

In our opinion, subjects of intellectual property are physical and legal bodies who directly or indirectly take part in process of appropriation and commercialisation of intellectual activity results, and also provided with corresponding rights and commitments within the limits of civil-law relations of intellectual property.

Depending on their role in intellectual property relations subjects can be divided into four groups: 1. Subjects that are initially provided with intellectual property rights thanks to direct participation in creation of intellectual property object (first of all it concerns objects of copyright, relative rights and industrial property); 2. Subjects that are initially provided with intellectual property rights due to passage of registration procedure and reception of the corresponding certificate (it concerns individualization tools which usually registered on legal bodies and literally does not grow out of intellectual activity); 3. Subjects who provided with intellectual property rights as a result of inheritance or contract execution; 4. Subjects who represent interests of subjects of the two first groups, carrying out mediatorial functions or acting in a role of authorised representatives; 5. Official bodies and the arbitrary organisations which regulate intellectual property relations.

It is necessary to notice that in the scientific literature is widespread the division of all intellectual property subjects on primary and secondary depending on the way of appropriation of intellectual property right [4, p.13]. To primary subjects referred authors of science works, works of literature and art, executors, manufacturers of soundtracks, videogram, programs of on-air broadcasting, inventors, authors of the utility models, industrial designs, configurations of integrated microcircuits, grades of plants, breeds of animals. To secondary subjects referred assignees and successors who get intellectual property rights on the basis of the contract execution or inheritance. In our opinion, the given classification is ill-posed, after all is based on the assumption that subjects of intellectual property relations are only owners of corresponding property and non-property sole rights. The given approach to understanding of subject structure of intellectual property relations is based on norms of Ukrainian legislation. At the same time, in our opinion, the given approach narrows a circle of participants of intellectual property relations and does not consider subjects who carry out regulating and mediatorial functions in the intellectual property market. Besides, being based on the definition of primary subjects of intellectual property given above, it is impossible to refer owners of individualization tools to whom concept “author” cannot be applied during to specificity of nature of trademark, geographical indications and other individualization tools.

At the same time, the classification of SIP on 5 groups covers all participants of intellectual property relations. Besides, primary SIP for individualization tools singled out in separate group which considers specificity of trade marks, geographical indications and company names as tools of individualization which reduce uncertainty, carry out information function and in direct understanding do not belong to intellectual activity results as their value is defined not by
a creative contribution, art or technological level, but depend from business reputation of the enterprise.

Near to the approaches considered above it is important to consider the preconditions for faster transformation of intellectual property relations. It is necessary to notice single out three groups of SIP: 1. **Institutional subjects** who take direct part in creation of intellectual property objects (objects of copyright, related rights or industrial property) or carry out primary registration of intellectual property rights on individualization tools. Noted subjects create object of intellectual property relations, constituting the market of intellectual property and forming institutional basis of existence of intellectual property relations. It is necessary to notice the financial tools emitted by economically active subjects, stimulating them in such a way to the further intellectual activity. 2. **Economically active subjects** which directly take part in commercialisation of intellectual property objects, that is carry out their introduction in economic turnover for the purpose of profit reception. To the given group mainly belong legal bodies who transform objects of intellectual property into the intellectual capital which takes part in a social reproduction and provides profit reception. Economically active subjects take up risks of commercialisation of intellectual property objects, provide production with use of objects of intellectual property, create innovative products and provide redistribution of a part of income for benefit of institutional subjects, stimulating them in such a way to the further intellectual activity. 3. **Financial institutions** which carry out mobilisation of financial resources of the separated small owners of the capital and their transformation in the investment into the intellectual capital, creating in such a way material basis for commercialisation of intellectual activity results. Mediate transactions of economic agents and providing movement of financial resources, financial institutions carry out accumulation of free financial resources of the separated owners of the capital by issue and sale of own financial actives, and then invest them in the financial tools emitted by economically active subjects of intellectual property relations. It is necessary to notice that in modern conditions the role of financial institutions in the intellectual property market is defining. After all the considerable part of projects of IPO commercialisation is characterised as unsecured, and the enterprises which are engaged in intellectual activity constantly feel deficiency of own financial resources. Therefore financial institutions under intellectual property relations form the financial mechanism of commercialisation of intellectual property results, accelerating economic turnover of the intellectual capital and providing preconditions for faster transformation of an intellectual product in a stream of incomes of economic activities.

According to article 421 of Civil Code of Ukraine, intellectual property subjects refer creator (creators) of intellectual property object and other persons to whom belong personal non-property and (or) intellectual property rights. According to article 423 personal non-property rights are: right to identification of person who create intellectual property object as a creator; right to interfere with any encroachment on the intellectual property right, capable to harm honour or reputation of the creator [6]. In the scientific literature in addition also consider the right to promulgation of intellectual property object, and also right to inviolability of intellectual property object. Personal non-property rights belong exclusively to the creator of intellectual property object, do not depend on intellectual property rights, are not limited in time and space and cannot be alienated, behind the exceptions established by the law.

To intellectual property rights refer: right of use of intellectual property object; exclusive right to allow use of intellectual property object; exclusive right to interfere with a use of intellectual property object; right to prohibit or forbid such use. Intellectual property rights are limited in time and in certain cases – in space, can be alienated according to the law can be used as assessed contribution to authorised capital.

The **creator of intellectual property object** is a physical person who has created it by his own intellectual activity. The citizen of Ukraine, citizen of other country or the person without citizenship irrespective of age and civil capacity can be the creator. Person can be recognised as the creator depending of his legal capacity. Thus ability to realise intellectual property rights depends on degree of legal capacity of the creator. The person who realises value of the actions has civil capacity and can supervise over them. Civil capacity is ability of the person to get civil rights and independently to carry out them, and also ability to create civil duties, independently to carry out and bear them responsibility for their default.

The physical person who has not reached 14 years, owns partial legal capacity. It has the right to make independently small household legal transactions (which satisfy household requirements of the person, answer its physical and social development, and also concern a subject which has low cost); to carry out the personal non-property rights to intellectual activity results. Persons at the age from 14 till 18 years own incomplete legal capacity. They are clothed with the right to make small household legal transactions, independently to dispose of the earnings, independently to carry out the right to intellectual activity results, to be the participant of legal bodies. Other legal transactions can be made by persons with incomplete legal capacity only under the consent of parents or trustee.

The physical person who has reached 18 years has full civil capacity. In case of registration of marriage of the person which has not reached 18 years, it gets full civil capacity from the moment of marriage registration. Besides, full civil capacity can be given the person who has reached 16 years and works under the labour contract, or the minor person which is written down by mother or the father of the child. Thus, granting of full civil capacity is carried out under the decision of body of guardianship and care under the statement of the person behind the written approval of parents or the trustee.

The court can limit civil capacity of the person if she suffers on mental frustration which essentially influences its ability to realise value of the actions or to supervise over them; if she abuses spirits, narcotics, gamblings and that puts itself in difficult financial position. Over the person with the limited capacity the care is established. Noted person retain the right independently to make small household legal transactions and to carry out the personal non-property rights to intellectual activity results. Other legal transactions can be made only at the consent of the trustee. Over the incapacitated person guardianship also is established. Thus the person has no right to make any legal transactions. It is necessary to note, that even incapacitated persons, store the right to carry out the personal non-property rights to results of intellectual activity.

Creator is the primary subject of intellectual property relations concerning copyright and industrial property. Creator is the physical person which personally carries out the non-property rights, and also realises property rights direct or indirect through the trustee or parents. At the same time, both physical and legal bodies can be the primary subjects of intellectual property relations concerning individualization tools and related rights.

The especial subject of intellectual property in case of official products is the employer. According to article 429 of Civil Code of Ukraine personal non-property rights on the object created in connection with execution of the labour contract, belong to the worker who has created this object [6]. Property rights on noted object belong in common to the worker and employer, who has created the object. Thus, a primary subject of intellectual property concerning official product is both the physical person and the legal body (employer). According to article 430 identical dis-
tribution of the rights between parties to relations of intellectual property is carried out in the case of objects created to order. Thus, to primary subjects of intellectual property on object created to order refers physical person (executor), and legal or the physical body (customer).

In case of the co-authorship in structure of primary subjects of intellectual property relations single out physical persons whose joint intellectual activity have created corresponding object of the property. Thus, the right to the product created in the co-authorship, belong to co-authors jointly irrespective of, represents product one indissoluble whole or consists of parts, each of which can have independent value (a product part has independent value if can be used irrespective of other parts of product). Relations between co-authors can be defined by the contract, otherwise the right to product should be carried out by co-authors in common.

It is necessary to notice that according to the domestic legislation, the subject of intellectual property there can be a state on the basis of inheritance, and also on the basis of talent or transfers of the rights by the primary subject of intellectual property to the state. Further we carefully will analyse subject structure of intellectual property relations concerning different intellectual activity results.

According to the Law of Ukraine "About copyright and related rights" the primary subject of the copyright is the author of work – the physical person who has created the work by own creative activity [8]. In the absence of proofs of the contrary the author of work considers the physical person noted in the usual way as the author on the original or a copy of work. Thus, the copyright arises from the moment of creation of work, and any registration or execution of other formalities is not required for copyright realisation.

In the case of combined and derivative works to primary intellectual property subjects refer editors, translators, authors of adaptation and summaries. The copyright to the combined work belong to the editor or compiler of the work. The compiler uses the copyright under condition of observance of the rights of authors of each work included in combined work. The copyright to the translation, adaptation, arrangement or other processing of works belongs to the author of derivative work. Thus, the author of derivative product uses the copyright under condition of observance of the rights of the author of processed work.

According to article 37 of the Law of Ukraine "About copyright and related rights" primary subjects of the related rights are the performer, manufacturer of a soundtrack, videogram, promulgations of broadcast. Origination and realisation of the related rights does not demand registration or execution of other formalities. In the absence of proofs of the contrary as the owner of the related rights are considered the person which name is noted on a soundtrack, videogram and their copies. Thus, the manufacturer of a soundtrack and videogram can be both physical and legal bodies. Only the legal body who has the licence for broadcasting can be the manufacturer of broadcast and owner of respective related rights.

According to article 463 of Civil Code of Ukraine a primary subject of intellectual property on the invention, utility models and the industrial design is the inventor or the author of the industrial design, physical persons, which intellectual activity creates corresponding object of the industrial property [6]. Property rights on the invention, utility model or industrial design arise from the date following date of their registration. The certificate of the registration is the evidence of right protection of the invention formula or set of essential features of the industrial design. It is necessary to notice that the basic condition of registration of the industrial property rights is their conformity to conditions of patentability. For example, patentability of invention defined by its novelty, inventive level and industrial suitability. Also, it is necessary to consider that the patent at will of the author can be given out to the physical (legal or physical) for which benefit author concedes sole rights.

Primary subject of intellectual property on configuration of integrated microcircuits is the author, physical person which intellectual activity creates corresponding object. Intellectual property rights on configuration of an integrated microcircuit arise from the date following date of their registration. The confirmation of the registration is the certificate, and the ambit of right protection is defined by configuration image on the material carrier. A condition of registration of configuration of an integrated microcircuit is its originality.

According to article 493 of the Civil Code of Ukraine primary subjects of intellectual property on a trade mark can be both physical, and legal bodies. Intellectual property rights on a trade mark arise from the date following date of their registration. The ambit of right protection is defined by the image of a trade mark resulted in the certificate and the inventory concerning which it used. It is important to consider that well-known trade mark does not demand registration. The right protection is given to trade marks which do not contradict a public order, humanity and morals principles, and also have distinctiveness power.

According to article 159 of the Commercial Code of Ukraine primary subjects of intellectual property on the commercial name are physical and legal bodies which perform enterprise activity [7]. Intellectual property rights on commercial name arise from the moment of its first use and are protected without registration or execution of any formalities, even if commercial name is part of a trade mark. The legal protection is given to commercial names which have distinctiveness power and do not mislead consumers. The rights to the commercial name can be alienated only together with complete assets of the subject.

According to article 9 of the Law of Ukraine "About protection of the geographical indications" primary subjects of intellectual property on geographical indications are physical and legal bodies which perform enterprise activity which conform to following conditions: produce goods in declared geographical place; the special features of products, certain qualities, reputation or any other characteristics are connected with this geographical place [9]. Property rights on simple geographical indications arise from the moment of its use, and property rights on the qualified geographical indications arise from the date following date of its registration. The legal protection is given to the qualified geographical indications, which have distinctiveness power; do not mislead consumers; do not contradict a public order, humanity and morals principles; is the name of a geographical place from which the goods coming from; are used as the name of the goods or a name component. Thus, in a geographical place there should be special conditions which give to the goods certain special qualities, and the goods or its basic component should be made in a corresponding geographical place. The ambit of right protection is defined by characteristics of the goods and limits of a geographical place noted in the certificate of registration. The rights to geographical indications can be alienated only together with complete assets of the subject.

The important place among results of intellectual activity is kept by untraditional objects of intellectual property. A primary subject of intellectual property on scientific discovery is its author, the physical person who has established unknown earlier, but objectively existing laws, properties or phenomena of the material world. The law protects only non-property rights of the author of scientific discovery. The right to scientific discovery can be confirmed with diploma, arises from the moment of reali-
sation of discovery and does not demand execution of any formalities. According to article 483 of the Civil Code of Ukraine primary subjects of intellectual property on efficiency proposal is author (physical person) and the legal body to whom this proposal is submitted. The ambit of right protection of efficiency proposal is defined by its description and drawings if they are submitted. Unfortunately, the domestic legislation properly does not regulate a question of the moment of occurrence of intellectual property right on the efficiency proposal.

To primary subjects of intellectual property on grades of plants and breed of animals refer authors (physical persons) who have created corresponding object with their intellectual activity. Intellectual property rights on grades of plants or breed of animals defined by their novelty and firmness (for breeds of animals — cleanliness). Primary subject of intellectual property on a trade secret is physical or the legal body which perform enterprise activity and which has defined it confidential and commercial valuable information as a trade secret and has carried out actions concerning maintenance of its privacy [1, p.178]. Property rights on a trade secret arise from the moment of definition of the information as confidential and commercially valuable and do not demand registration or executing of any formalities.

Conclusion: Summing up research it is necessary to notice that relations of intellectual property under formation of a postindustrial society form an important component of basis of system and carry out stimulating, distributive, system and innovative functions within the framework of a public reproduction.

Over a period of genesis and evolution intellectual property relations lawyers-practice and scientists used different criteria of classification of intellectual property objects. Two groups of approaches to classification of intellectual property objects have been considered: depending on character of intellectual property objects and depending on set of minor features. Besides, necessity of defining of incorporeal objects of intellectual property which cannot be labelled as objects of copyright, industrial property or branding tools, and at the same time own a number of the general patrimonial features has been proved.

Ukrainian legislation thoroughly regulates subject structure of intellectual property relations. Norms of Ukrainian intellectual property right define sole non-property and property rights of parties to intellectual property relations. In scientific literature is widespread the division of all intellectual property subjects on primary and secondary depending on the way of appropriation of intellectual property right. In our opinion, the given classification is ill-posed, after all is based on the assumption that subjects of intellectual property relations are only owners of corresponding property and non-property sole rights. As a result of the carried out research we had been offered two new approaches to classification of party's to intellectual property relations depending on their role in relations of intellectual property and their economic functions are offered, which allow to embrace as much as possible all participants of intellectual property relations, consider their role in the process of commercialisation, and draw attention to subjects which carry out regulating and mediatorial functions on the intellectual property market.

The topicality of a problem of effective institutional regulation of intellectual property relations, protection of intellectual property rights, creation of preconditions for effective commercialisation of intellectual activity results testify to objective necessity of the further development of theoretical and methodological basis of research of nature and structure of intellectual property. It is necessary to analyze approaches to structurization of intellectual capital, methods of intellectual property objects valuation, and activity of intermediaries in the intellectual property market. Thus, necessity of carrying out of the further researches for the given direction does not raise the doubts.

References
The article deals with experience of application of international financial reporting standards in different countries with economies in transition. The main advantages and disadvantages of the implementation of international financial reporting standards for financial reporting for Ukrainian companies are based on this experience.

Keywords: financial reporting; accounting; accounting policies; accounting system; IFRS.

Globalization of the economy has the following implications for the harmonization of accounting: increasing of mobility of capital and, consequently, the need for investors to measure a single approach, evaluation and maintenance of such investments for making right decisions. In addition, it is expected that the usage of IFRS can improve the quality of financial reporting and ensure submission of detailed information on the performance of companies.

Application of International Financial Reporting Standards in the European countries is performed in accordance with the Rules of Procedure of the European Union (EU) on July 19, 2002 № 1606/2002. The article 4 of the Rules sets mandatory preparation of consolidated financial statements in accordance with IFRS by companies which are listed. Companies that are not listed are also allowed to apply IFRS in the preparation of the annual accounts [2]. Today there are a wide variety of approaches to the application of IFRS. However, in any case, with the introduction of international standards, companies are less likely to resort to manipulation and concealment of the profit of business results.

Analysis of the implementation of IFRS in the accounting practices of companies of the world shows the increasing trends of recent years and the positive effect of the usage of international standards. Thus, IFRS are permitted or required for usage in 109 countries, including 81 – for listed companies and 28 – for unlisted companies.

In the world today there are several accounting systems based on regional, economic, political and social conditions. The well-known is an approach for accounting separation into the following types: Anglo-Saxon, Continental, Latin American and Islamic model.

In the Anglo-Saxon model the financial reporting is considered as the main source of information for investors and creditors. Almost all companies are present in the securities market, and they are directly interested in providing objective information about their financial situation. Today, this model is used in the UK, the USA, Australia, Israel, India, Canada, Central America, and others.

Unlike the Anglo-Saxon model in Continental model considerable attention is paid to legislative regulation of accounting and the main users of financial statements are the tax and other government agencies. The countries of this model include Austria, Greece, Denmark, Spain, Italy, Germany, Norway, Portugal, France, Japan and others.

A distinctive feature of the South American model is adjusting indicators of financial statements based on changes in the general price level, caused by unstable economic situation and high inflation. These adjustments are necessary to ensure the reliability of financial reporting. However, such claims are not directed at meeting the needs of investors but at performance of the state annual budget. This model is characterized by such countries as Brazil, Peru, Uruguay, Chile and others.

One of the forms of accounting and financial reporting is the Islamic model, which is typical for Muslim countries and formed under the influence of national characteristics. This model has a number of features, including prohibited financi-
cial dividends for increasing revenues, and while evaluation of assets and liabilities only market prices are used.

There are several different approaches to grouping countries according to the degree of implementation of IFRS. In particular, countries should be grouped into six groups:

- Direct permission to listed companies through special procedures (the European Union);
- Convergence of national standards with IFRS for listed companies (the USA, Japan);
- Convergence of national standards with IFRS for all companies (the UK);
- IFRS conversion into national standards (New Zealand, Australia, Hong Kong, Singapore);
- Development of new national standards and improvement of existing national standards towards their compliance with IFRS based on national characteristics (India);
- Work with the recognition of national standards equivalent to IFRS (in the EU for Canada, Japan and the USA).

It is interesting to note that some countries which are moving to IFRS (e.g. Kenya), argue that this decision will allow them to save money on development of standards and send them to practical implementation.

Some different vision to the division of the countries of the world is declared by the Committee of International Financial Reporting Standards. Its official website defines four categories of countries on the implementation of IFRS at this time:

1) the full implementation of IFRS for all companies, regardless of whether they are included in the exchange listing or not. This category corresponds to 36 countries;
2) compliance with IFRS mandatory only for companies listed in the stock exchange. To this group belong: China, Estonia, Latvia and Hong Kong;
3) the countries whose law permits the usage of IFRS or other internationally accepted accounting principles (e.g. U.S. GAAP) instead of national rules. Examples of such countries are Denmark, Germany, Hungary and the Netherlands;
4) the countries whose national financial reporting standards are close to IFRS, such as Egypt, Malaysia, Singapore, South Africa, and the degree of approximation of national standards with IFRS varies [5, p.11].

The greatest practical interest is the experience of countries that have fully switched to the requirements of International Financial Reporting Standards. However, studies of the introduction of international accounting standards in the practice of foreign companies show that only 35 countries have declared the mandatory usage of IFRS for listed companies and, to some extent, for companies that are not included in the listing. These countries are divided into four groups:

- Middle Eastern countries (Bahrain, Kuwait, etc.);
- South America (Peru, Honduras, etc.);
- Former British colonies (Barbados, Cyprus, Kenya, etc.);
- Transition countries (Georgia, Croatia, etc.). [5, p.12].

But the most important for the effective implementation of IFRS in Ukraine is the experience of developing and transition countries and countries – members of CIS. This is due to the historical aspects of the economy and similar conditions of doing business. Having the same economic problems in the post-Soviet era encourages CIS governments to search common approaches in the formation of the accounting and financial reporting.

Russia. Accounting reform in Russia began with the adoption of the RF Government Resolution on March 6, 1998, № 283, which approved the program of reform of accounting in accordance with International Financial Reporting Standards. Six years later the Concept of accounting and reporting in the RF was adopted (on July 1, 2004, № 180). On July 27, 2010 the law "On the consolidated financial statements" № 208-FZ was signed. The law establishes general requirements for the mandatory drafting, filing and publication of consolidated financial statements in accordance with international standards.

One of the main issues of IFRS implementation is a system of training and retraining of personnel. IFRS are much more complex than the Russian accounting rules and financiers are required more training, acquisition of additional knowledge and skills. Currently, the majority of Russian banks and companies don't have specialists who are qualified in the field of IFRS. Professional experts are expensive, and not every organization can afford to hire them. On the other hand, it can motivate companies to the organization of professional training.

No less of a problem during the implementation of IFRS in Russia is the language issue. The official language of international financial reporting standards is English. Therefore there is a need for an official translation of international standards and ensure timely translation adopted changes and amendments. It is necessary to create a special body in order to perform technical translation of IFRS' articles and their timely updating. It is important to organize work in such a way that changed standards reach the users in time and don't be late at the stages of adoption.

Belarus. In Belarus there is a number of principles and methods of accounting, the financial statements differ from International Financial Reporting Standards of other countries. That's why many Belarusian enterprises that seek to cooperate with foreign partners, have to do extra work to ﬁnalize their accounts to match the requirements of IFRS. A key challenge for the accounting and reporting is preparing legislation that allows implementing international standards in full, while it must be consistent with the rest of the legislation, be complete and clear.

It is necessary to prepare amendments to existing regulations that allow banks and businesses to prepare financial statements according to international standards for foreign and domestic visitors. The main document that deﬁnes the direction of the reform of the ﬁnancial statements in Belarus is the state program of transition to IFRS adopted by the Council of Ministers of Belarus in 1998. It is also important to work on the harmonization of national accounting and ﬁnancial reporting of the rules adopted in the states – members of the Customs Union.

The feature of financial statements reform in Belarus can be considered the fact that in the transition to international standards banking sector is ahead of the industry. While the financial community continues to discuss possible ways of reforming Belarusian enterprises accounting, the National Bank of the Republic of Belarus in accordance with the Banking Code, decided to develop national standards of ﬁnancial reporting on the basis of international standards. The beginning of reform in accounting in the banking sector was launched in 1994. That time a fundamental work on the transition of the banking system to international accounting principles and financial statements in accordance with IFRS was made. In 1996 Belarusian banks have moved into new Chart of Accounts. The policy of the National Bank on transition to IFRS takes into account the development of economy and legislation. New accounting system for the past seven years has been quite effective, allowing the National Bank and others to obtain information for a new level of decision-making [6].

The next stage of the accounting reform was the adoption in 2001 by the National Bank of Belarus a number of regulations that have approved National Financial Reporting Standards (NSFZ) and the rules for their application. The first was the standard IAS 29 "Financial Reporting in Hyperinflationary Economies" (NSFZ 29), which deter-
mines the order of translation of banks reporting in hyperinflationary economies.

The next was the standard 27 "Consolidated Financial Statements and Accounting for Investments in subsidiaries" (NSFZ 27), which establishes requirements for the preparation of consolidated statements by banks including ownership interests in equity.

Standard 30 "Financial Statements of Banks" (NSFZ 30) is applied only in the banking sector. It covers the accounting policies, the balance sheet, profits and losses, potential liabilities and contingent events, including off-balance sheet articles, maturities of assets and liabilities, the concentration of assets, liabilities and off-balance sheet items, accounting for losses on assets, major risks, assets provided as security, trust management, related party transactions [6].

Despite significant gains in terms of accounting reform of banking institutions, accounting system in other sectors of the economy remains unchanged. One reason for the inability to immediately transition to IFRS is the lack of a sufficient number of qualified professionals. Most professionals who have been trained are employees of commercial entities in which there is the share of foreign capital and which must maintain accounting records in parallel of international and national standards. Gaps in the existing accounting system prevent not only the inflow of foreign investment in the country, but also complicate the work of the enterprises themselves, because they do not provide realistic revenue.

Moldova. Over the past three years, Moldova gradually transformed into a system of accounting and reporting in accordance with IFRS. Currently Moldova reached the following main results in the transition to IFRS: a new regulatory framework of accounting is created, new financial statements are designed and implemented, a program of professional education and certification of accountants and auditors is introduced.

Legislation accounting is based on IFRS and includes three main elements: National Accounting Standards (NAS). Comments on the usage of UAS, Chart of Accounts. NAS are based on IFRS and approved by the Ministry of Finance of Moldova. They establish general principles and accounting rules for all economic entities, regardless of their industry sector, type of ownership and legal form.

They establish general principles and accounting rules for all economic entities, regardless of their industry sector, type of ownership and legal form.

Although the NAS and are based on IFRS, the NAS include two standards that are not included in the list of IFRS. However, they are necessary to facilitate the assimilation of the new accounting system. According to the Concept of accounting reform, approved by the Government of Moldova in 1997, the NAS shall be adjusted in accordance with the amendments made to IFRS. Moreover, the NAS list will be updated with the adoption of new IFRS. At the same time, in the absence of specific NAS, relevant provisions of IFRS shall be applied.

Chart of Accounts sets forth synthetic accounts and sub-accounts and methodological standards for their use, which is mandatory to use. The summary of financial reporting and the procedure for the evaluation of its performance is in accordance with the principles of IFRS and do not require transformation. These include the balance sheet, income statement, statement of cash flow, statement of equity and applications.

The system of continuing education and certification of accountants and auditors was introduced in the early stage of transition to IFRS in Moldova. To this end, continuing education was passed by the vast majority of accountants and auditors. Certification of accountants and auditors is held twice a year under the IFAC program. Preparation and conduct of examinations conducted by the Association of Certified Accountants and Auditors of the Republic of Moldova, which is an associate member of IFAC. The structure of the certification committee, which includes experts and staff members of foreign audit firms and projects have their representation in Moldova. Accountants with qualification certificates have significant advantages in employment in both public bodies and private firms.

Kazakhstan. The beginning of the process of reforming the accounting system in Kazakhstan was the adoption of the Decree of the President of the Republic of Kazakhstan "On Accounting" dated December 29, 1995. The decree has the force of law and is the first piece of legislation that determines the direction of establishing a system of accounting and preparation of financial statements in accordance with the principles adopted in international practice. [6] The decree legislatively defines accounting standards as documents that establish the methods and procedures of accounting and financial reporting, the basic principles of external and internal audit. Kazakh accounting standards are based on international standards, but at the same time take into account the peculiarities of the local market economy and legal requirements.

The program for transition to IFRS in Kazakhstan, in particular, is one of the most important areas of work within the framework of the securities market in the Republic of Kazakhstan. The Resolution of the National Commission of the Republic of Kazakhstan dated November 12, 1996 Number 2 agreed conceptual framework for the preparation and presentation of financial statements, which have been identified following topics: basic concepts underlying financial statements, the purpose of drawing up the basic principles of accounting recognition and measurement of elements of financial statements. On January 1, 1997 20 accounting standards were introduced.

The process of accounting reform in Kazakhstan can not be completed because the original forms and statements and the tax base for tax calculation often continue to change. Reporting under IFRS without auditors and experts from accounting methodology is quite a complicated process, but the country's powerful system of vocational training.

The new accounting system adopted in Kazakhstan in accordance with International Accounting Standards allows businesses to organize accounting so that he could meet the specific, forms of organization, type of activity and requirements submitted by users of financial information.

Kyrgyzstan. On April 3, 2000, the President of the Kyrgyz Republic issued Decree № 73 "On measures to reform the accounting and financial reporting," according to which the National Commission for the financial reporting standards and auditing of the President of the Kyrgyz Republic was established. For legal entities support the transition to IFRS State Commission drafted the Law of the Kyrgyz Republic "On Accounting", which establishes a common methodological framework for accounting and financial reporting in Kyrgyzstan under IFRS for all entities, regardless of ownership and defines the legal basis of accounting, its content, principles, organization, main activities of the accounting and financial reporting.

Application of IFRS in the country requires professional training. Thus, to date 6923 persons passed IFRS training in training centers. [6]To create a methodological framework of transition to IFRS and its harmonization with the current system of accounting, the State Commission developed guidelines and comments on the application of IFRS. In order to develop entrepreneurship in the country, achieve transparency for external users and the expansion of this training method of accounting and financial reporting based on IFRS for small and medium businesses will be developed. The international standards for financial reporting and
audit will address the following strategic objectives: the formation and development of the financial market that operates on the basis of market principles, the development of the financial market infrastructure.

Uzbekistan. In order to coordinate efforts during the reform of accounting and reporting, on 19 October 2001, Association of Accountants and Auditors of Uzbekistan signed an agreement with the International Association of Accountants and Auditors of "Commonwealth" for joint development on reform of accounting and auditing in Russia and Uzbekistan. Association of Accountants and Auditors of the Republic of Uzbekistan provides education and publishing activities in the framework of the reform of accounting and financial reporting.

Tajikistan. The first attempts at economic reform in Tajikistan were made in 1994 with the active participation of the World Bank. Its specialists drafted the Economic Memorandum for Tajikistan. In mid-1995 the new government of Tajikistan has been actively collaborating with the World Bank and the International Monetary Fund in matters of development program of macroeconomic stabilization and structural reforms, which led to the adoption in November 1995 of the Government reform program covering the period of 1995-2000. One component of the program was development and implementation of a new method of accounting and auditing bank accounts and to develop effective mechanism to transfer payments and inspections of banks [6].

Turkmenistan. Since November 2001, the territory of Turkmenistan has a program of professional certification of accountants, implemented as part of the accounting reform. In recent years, Turkmenistan created the legal framework for the transition to a market economy, improving the existing regulations. In particular, the Law "On Auditing" and "On Accounting". The Department methodology of the Ministry of Economy and Finance of Turkmenistan discussed the possibility of establishing the Association of Professional Accountants and implementation of international standards.

Development of business is accompanied by the growing role of international integration in the economy, which requires a review of existing methods of accounting and financial reporting. Application of international accounting standards improves transparency, comparability of financial statements, provides distribution of reliable information among its members as which increasingly serves not only to the state tax authorities, financial institutions, but also potential investors. Therefore there is a need for a harmonization of legislation of Ukraine with international standards and creation of favorable conditions for domestic enterprises to use the IFRS.

Based on the experience gained from the first implementation and application of IFRS, the transition economy countries singled out the main shortcomings of the process of applying international standards in accounting and financial reporting:

1. Lack of standardized requirements for the application of national financial reporting standards and IFRS, and lack of standards that make use of IFRS required will in practice lead to various abnormalities. In respect of this there may be difficulties in comparing financial statements to be prepared by different approaches.

For example in Poland, the national Financial Reporting Standards structurally very similar to IFRS, but in fact there are significant differences. This may hinder the achievement of one of the main purposes of IFRS, namely the comparability of financial statements across countries.

2. Lack of qualified specialists for reporting under IFRS and the available means to prepare such specialists. It is likely that due to the complexity of compliance and enforcement of the IFRS, its requirements may be neglected.

The IASB Board is considering developing guidelines for the application of IFRS for small businesses. Some
countries are also trying to solve this problem. For example, in the UK there is a special standard for small businesses. In New Zealand, where financial reporting is much closer to IFRS, also has all interested parties (including investors) could obtain neutral and objective information about the activities of companies. Transition to IFRS provides new opportunities for businesses and the country as a whole.

Advantages of the use of IFRS in the preparation of financial statements in Ukraine pertain to micro and macro levels of the economy.

The benefits at the microeconomic level of the economy are:
- growth in market capitalization;
- access to international capital markets and lower prices of capital;
- more effective use of information for decision-making.

The main advantages of the economy at the macroeconomic level are the following:
- foreign investment in the economy;
- greater transparency in the reporting of domestic companies and as a result improvement of the image of business abroad;
- a deeper integration of the economy into the global economic system;
- improved quality of statistical information and the possibility of comparison.

IFRS may be useful even for those Ukrainian companies that are not planning to enter the Western financial markets. The effect is to provide managers with information that enhances management efficiency, strengthen the system of corporate behavior, and hence the credibility of management. The most beneficial effect of IFRS will have on companies where the owner has no representatives in the company and has to use information, we obtained from the company and has to use financial statements in accordance with IFRS.

Development and approval of IFRS was initially carried out to ensure that all interested parties (including investors) could obtain neutral and objective information about the activities of companies. Transition to IFRS provides new opportunities for businesses and the country as a whole.

Conclusions. A transition to International Financial Reporting Standards may result in both positive and negative consequences for the companies. Among the positive aspects is increasing transparency, improving comparability and, consequently, increase of opportunities to analyze their activities and facilitate access to international capital markets. However, statements as such do not guarantee investment flows. In addition, the transition to IFRS will require companies' additional labor and cost, and evaluation of the positive economic impact of this innovation will initially be quite difficult.

Using the basic principles of international accounting standards would be useful for a variety of companies in Ukraine. However, it is necessary to establish different requirements for objects of disclosure in the financial statements for different groups of companies, including volume of transactions in the capital markets and volumes economic activity.

Essential for the effective implementation and use of IFRS in Ukraine are state agencies and public professional organizations, whose role is to prepare for the introduction of International Financial Reporting Standards and promoting the use and implementation of these standards.

At first glance, field-specific problems of accounting and financial reporting really constitute an important condition for economic reforms. Thus, due to the introduction of IFRS in Ukraine, a system for accounting, reporting and oversight of entities will be created to be transparent and understandable for different stakeholders.

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NEW INSTITUTIONAL ECONOMICS FRAMEWORK
FOR ASSESSING AND IMPROVING AGRARIAN ORGANIZATIONS

We incorporate interdisciplinary New Institutional and Transaction Costs Economics and suggest a framework for assessing efficiency of farms and agrarian organizations. Our new approach includes: study of farm and agrarian organizations as governing rather than production structure; assessment of comparative efficiency of alternative market, contract, internal, and hybrid modes of governance; analysis of level of transaction costs and their institutional, behavioral, dimensional, technological and natural factors; determination of criteria of farm efficiency and its effective boundaries; specification of economic role of government and needs for public interventions in agrarian sector; assessment of comparative efficiency of alternative forms of public involvement.

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FINANCIAL MECHANISM OF THE INNOVATIVE ACTIVITY IN THE REPUBLIC OF KAZAKHSTAN.

The paper considers the theoretical and practical issues of the development of financial mechanism of innovation activity in the Republic of Kazakhstan. In article defined conditions and preconditions of development of the existing financial mechanism of innovative activity which doesn’t reach the financing of the sphere of researches corresponding to world level and development in Kazakhstan. It is also defined that, the main direction of science funding and an innovation in Kazakhstan is focused on compensation of the current expenses that leads to damage of financing of capital expenditure. For the solution of these problems it is recommended to use multichannel system of science funding and an innovation in Kazakhstan, on the basis of active attraction of private and extrabudgetary financial resources. The offered control system of finance has to be directed on combination of interests of innovative development of the enterprise and not reduce sufficient level of money and solvency of public involvement.

PRIORITY DIRECTIONS OF FINANCE MANAGEMENT SYSTEM DEVELOPMENT IN STATE BUSINESS AREA OF KAZAKHSTAN

Theoretical foundations of finance management in the public sector of economy in the transition to budgeting focused on the result are considered. It is determined that Kazakhstan is a country with high levels of public enterprises in the economy through the creation and operation of special National companies. This required the implementation of appropriate mechanisms of improvement of efficiency of significant public sector of Kazakhstan, through the development and implementation of an adequate system of financial management in national companies. It is established that in the context of deepening market reforms, public sector efficiency depends not on the size of the state property, but on the efficiency of public finance management. Limitations and advantages of the system of financial management in the National companies of Kazakhstan are identified, which allow develop recommendations for improvement of effectiveness of scope of state business area.

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AN INFLUENCE OF INTERNATIONAL LABOR FORCE MIGRATION ON NATIONAL COMPETITIVENESS

The governmental regulation of labor force migration is an important part of country's image. The interdependence between international labor force migration and national economy's competitiveness is analyzed. The Global Competitiveness Index was chosen as a background of the research. The ways of improving of Ukrainian performance in a Global Competitiveness Index are defined. Tough control and the migrants inflow limits implementation will cause a decrease in an unemployment rate and an increase in a competitiveness of national business. The stimulation of the high-qualified specialists' immigration is also a way of gaining a competitive advantage. The necessity of governmental programs, supporting national entrepreneurs must be emphasized.

FINANCIAL REPORTING AND SOURCE DOCUMENTS OF UKRAINIAN ENTERPRISES WHEN APPLYING THE IFRS

The article inquires into the changes that occur in financial reporting and source documents, specific to Ukrainian enterprises, in the context of the International Financial Reporting Standards (IFRS) implementation. The development of theoretical and methodological principles of researching the regularities of these changes is based on the basic macroeconomic concepts of generation and disclosure of the information in the forms of financial reporting in accordance with the requirements of international standards. The regularities have been examined in accordance with their presentability. Firstly, ensuring constant and systematic balance between the information needs of the Ukraine’s economic strategic management in the quality analytical accounting information in financial reporting and the source documents. Fourthly, providing the interconnection of the quality of analytical accounting information in financial reporting by its systematization and generalization in accounting registers. Fifthly, ensuring the storage, withdrawal and utilization of source documents and accounting registers as a necessary tool for controlling the quality of analytical accounting information in financial reporting of an enterprise. Sixthly, inventory-taking as a mandatory internal tool for controlling the quality of analytical accounting information in financial reporting of an enterprise. Secondly, ensuring consistency in the forms of financial reporting between the contents and the amount of generation and disclosure of the information in the forms of financial reporting in accordance with the requirements of international standards.

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The article inquires into the changes that occur in financial reporting and source documents, specific to Ukrainian enterprises, in the context of the International Financial Reporting Standards (IFRS) implementation. The development of theoretical and methodological principles of researching the regularities of these changes is based on the basic macroeconomic concepts of generation and disclosure of the information in the forms of financial reporting in accordance with the requirements of international standards. The regularities have been examined in accordance with their presentability. Firstly, ensuring constant and systematic balance between the information needs of the Ukraine’s economic strategic management in the quality analytical accounting information in financial reporting and the source documents. Fourthly, providing the interconnection of the quality of analytical accounting information in financial reporting by its systematization and generalization in accounting registers. Fifthly, ensuring the storage, withdrawal and utilization of source documents and accounting registers as a necessary tool for controlling the quality of analytical accounting information in financial reporting of an enterprise. Sixthly, inventory-taking as a mandatory internal tool for controlling the quality of analytical accounting information in financial reporting of an enterprise. The article is a contribution to the development of accounting theory and establishment of financial reporting as a separate branch of economic science in Ukraine.
INNOVATIVE ENTREPRENEURSHIP IN UKRAINE: AXIOLOGICAL ASPECT

The value descriptions of innovative entrepreneurship are considered. Nowadays it is a motive force of not only economy development but also the whole society. The important role of innovations in everyone’s life is shown. It is proved that innovations are also the means of survival for modern entrepreneurship in a changeable market environment. It is determined, that innovative activity is impossible without deep knowledge, scholarship and aspiration to improve quality of commodities, services, attain the market in the world is being analyzed, some information on the countries with the most commodity turnover of organic products, mine the specific features of forming and developing organic products market in Ukraine, and the perspective directions of its development based on analysis and practice of functioning of such markets in the world. The environmentally sound products are also the means of survival for modern entrepreneurship in a changeable market environment. It is determined, that innovative entrepreneurship must obtain necessary spiritual energy in an order to become the leading factor of the Ukrainian economy innovative development, to provide its modern modernization, to carry out a transition to postindustrial society.


SPECIFIC FEATURES OF DEVELOPMENT OF ORGANIC PRODUCTS MARKET IN UKRAINE

The article is dedicated to the development of new and improvement of existing theoretical and methodological basis of forming and developing the market of organic products, its correspondence to the present-day situation, determination of problems and ways of their solving, introduction in practical activity of Ukrainian enterprises. The main objective of the article is to determine the specific features of forming and developing organic products market in Ukraine, and the perspective directions of its development based on analysis and practice of functioning of such markets in the world. The environmentally sound products market in the world is being analyzed, some information on the countries with the most commodity turnover of organic products, structure of international market of organic products, volumes of sales of organic products in the European countries is provided. As a result of studying the modern trends of economic development the authors reach a conclusion on problems of standard introduction, investigate the European norms and requirements for organic products. The conducted research allows distinguishing the basic features of Ukrainian market of organic products: it quickly grows, which makes it especially appealing for the participants of market relations, however entry into this market requires considerable capital investments and is characterized by high risk; criteria for qualifying products as environmentally sound products are unstructured and unclear. The potential for growth of organic products market in Ukraine is examined.

AN ECOLOGICAL-ECONOMIC CONVERGENCE: TRANSITION TO SUSTAINABLE ENERGY

Sustainable energy development is complex challenge, so only complex decisions and approaches could be possible to implement in the most efficient way. There is still open question – what is the optimal volume of new energy resources using to support sustainable development and environment safety for any state of the world. Article deals with the availability of convergence to serve for the more effective usage of analytic and system approaches for modeling ecological-economic spillovers in the case of transition to sustainable energy. The economic effects of sustainable energy transition are considered. The analysis of dynamic of energy consumption in the scale of different type of resources during 1820-2030 years depicted the situation of complicated analysis of "economy-energy-environment" linkage. It arises the agenda of necessity to implement complex approaches for modeling and forecasting of new energy systems development. Different types of models and techniques to analyze economy-energy systems are listed and compared.

COMPARATIVE ANALYSIS OF THE KEY FACTORS OF GROWTH OF STATE DEBT OF UKRAINE AND EU

Based on research results, economical-statistical model was developed aimed to exhibit the connection between the government debt and major economic factors, namely: gross capital formation, household consumption and credits granted to the residents. After the statistical data of European countries had been examined, the peculiarities of debt formation were elicited in each of them. As a result, the relation between the type of economy and factors of debt formation was outlined.


MODERN APPROACHES TO ACCOUNTING AND TAXATION IN ENVIRONMENTAL ENTREPRENEURSHIP

Modern tendencies of harmonization of accounting in European countries and moving to International Financial Reporting Standards cause necessity of bringing new accounting and taxation approaches in the field of environmental entrepreneurship to improve the quality and reliability of financial statements of enterprises. Detailed analysis of national and international principles of accounting of taxes and charges calculation indicates on its harmonization in terms of recognition, evaluation and classification of taxes and charges, especially in the part of separation of deferred tax assets, and deferred tax liabilities in the balance sheet, determining income tax by comparing income and expense of enterprise in the accounting period, as well as reclassification of taxes and charges by liabilities, tax differences that appears at enterprises during running its economic activity, separating of canceled differences and its presenting in accounting records. In addition, while running entrepreneurship activities it is necessary to obey complex approach to recognition and payment of tax liabilities, definition of tax base, and calculating amount of tax and fees which should be paid to the budget. This will facilitate development of environmental business in Ukraine, implementing model of environmentally-clean manufacturing at enterprises of green business, preserving and efficient use of resources.


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PECULARITIES OF APPROACHES TO THE ASSESSMENT OF CORPORATE Mergers IN THE BANKING SECTOR OF UKRAINE

Financial and economic measures of effectiveness of corporate mergers and acquisitions in the banking sector of Ukraine are identified, such as: increase of the market value of banks, securing of their capitalization, investment attractiveness and competitiveness of corporations growth, the expansion of long-term financing sources. A comprehensive methodological approach to the valuation of corporate mergers and acquisitions on the basis of the calculation of synergy effect of the banks' merger is developed. Synergy is identified as the main source of growth for banks in the process of merger (acquisition). Assessment of value of the bank created as a result of the merger of PJSC "First Ukrainian International Bank" and PJSC "Dongorbank" that took place in 2011 is conducted on the basis of the method of modified income approach and the use of forecasted financial performance indicators. Synergy effect from banks' merger was calculated. Determining of additional assumptions, such as: ensuring constancy of assets, revenues and expenses structures, evenness of liabilities and assets, discount rates growth and others, is substantiated. The feasibility of applying the income approach, combined with the method of projected financial statements for the valuation of the results of bank mergers and calculation of synergy effect is demonstrated.


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FORMATION OF ENTERPRISE INTELLECTUAL CAPITAL IN CONTEXT OF RESOURCE THEORY

The main content of the resource theory and description of it evolution in three stages were considered in this article. The first stage was the formation of the classical concept of the resource, the second – the origin and development of the concept of core competencies and dynamic organizational capabilities, and the third is associated with the formation of the theory of resource advantages. The nature and the necessity to identify new resource elements (core competencies, dynamic capabilities and organizational routines) were characterized in the context of the selected stages. The signs of sustainable competitive advantage and types of economic rents that arise on the resource base were generalized. There is a connection between resource theory and concept of knowledge management based on identification of intellectual component in the economic nature of the core competencies and organizational abilities. The basic approach to the classification of resources and their elements, which form the intellectual capital of the company was described. New elements of economic resources such as competencies, organizational abilities, rutin and elements of intellectual capital are in close connection. It is concluded that the core competencies are...
best developed in human client and networking elements of intellectual capital, dynamic organizational capability in innovative capital and routines in process capital of an enterprise.


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NATIONAL INSURANCE MARKETS IN FORMATION OF EURASIAN ECONOMIC SPACE

Integration processes of the national insurance market of Kazakhstan into the global economy will inevitably lead to the fact that the domestic insurance market will experience more and more influence from the events taking place in the global community. One of the key factors of a successful integration into the global economic environment is cooperation with the countries whose economies stand on the same platform with the domestic. In order to implement a successful integration between the national markets of the CIS countries it is very important to develop effective mechanisms of entering of the market into Eurasian community. To solve this problem, the author provides general characteristics of national insurance markets of Kazakhstan, Russia and Belarus.

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METHODOLOGICAL ASPECTS OF QUALIFYING ACADEMIC PAPERS PREPARATION

(IMPORTANCE OF SCIENTIFIC PROBLEMS, DEFINITIONS OF THEME, GOALS, OBJECTIVES, SUBJECT AND OBJECT OF STUDY)

Modernization of the Ukrainian economy is being negatively affected with drastic change of methodological principles in economic research that appeared in the rejection of the Marxist approach to study economic process and usage instead of it postmodernist methodology. Negative influence of postmodernist methodology can be seen in the inability to solve the basic problem of the initial phase of preparation of any academic research paper, as doctoral thesis or scientific report. The purpose of the article is to present: the logic of scientific problem’s relevance, the identification of research topic, objectives and goal setting, subject and object of qualification research paper determination. For that to be done, as article demonstrates, firstly the research should be based on the principles of modern methodology involving compliance of certain logic topic’s goal, objectives, the subject and the object of the research. Secondly, the logic of research’s justification should be met. Thirdly, the main components should be analyzed while the scientific research’s identification: theoretical and practical output and the solving problem. The last one is to separate the object and the subject of scientific research. Article’s statements are illustrated with academic research “Managing Business Risks in Ukraine” that has been prepared to obtain degree Doctor of Economics.


INTEGRATION AND NETWORKING MECHANISMS OF PROMOTING SCIENTIFIC AND INNOVATION ACTIVITY IN THE HIGHER EDUCATION SYSTEM OF KAZAKHSTAN

The article considers the theoretical and practical issues of development networking integration forms of the universities in the innovation sphere on modern stage. Determined that the national innovation system in Kazakhstan unbalanced today; its main elements are scientific and technical sphere, universities, enterprises, innovation infrastructure – exist in isolation. At the same time, reforms in innovative-industrial sphere did not become a stimulus for activation of the University science. Identifica-
Article is devoted to theoretical analysis of nature and structure of intellectual property relations. Types of intellectual property relations and its role in public reproduction are investigated. Peculiarities of intellectual property relations are considered. Two groups of approaches to classification of intellectual property objects are analysed: classification of objects depending on its characteristics which is based on the analysis of their most essential features, specificity of their protection, features of realisation of the property and non-property rights; classification on the basis of various minor criterions which do not reveal nature of defining of incorporeal objects of intellectual property which cannot be labelled as objects of copyright, industrial property or branding tools is proved. Criteria of classification of party's to intellectual property relations are investigated. The subject structure of intellectual property relations according to the legislation of Ukraine is defined. New approaches to classification of party's to intellectual property relations depending on their role in relations of intellectual property and their economic functions are offered, which allow to embrace as much as possible all participants of intellectual property relations, consider their role in the process of commercialisation, and draw attention to subjects which carry out regulating and mediatorial functions on the intellectual property market.


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ANALYSIS OF THE IMPLEMENTATION OF INTERNATIONAL FINANCIAL REPORTING STANDARDS
BY COUNTRIES WITH ECONOMIES IN TRANSITION

The article analyzes the experience of application of International Financial Reporting Standards (IFRS) in different countries with economies in transition. The common problems and suggested ways to overcome them in the implementation of IFRS are defined. The main advantages and disadvantages of the usage of IFRS in accounting and financial reporting by entities in
Ukraine are grounded. The interaction of state bodies, public entities and professional organizations plays an important role in the effective implementation and usage of IFRS in Ukraine and it lies in preparation for the introduction of IFRS, usage and implementation of these standards. The implementation of IFRS in Ukraine for financial reporting solves the problem of creating the accounting, reporting and oversight of entities that are transparent and understandable for different categories of users.

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