ISSN 1817-3772

ЕКОНОМІЧНИЙ ВІСНИК ДОНБАСУ

науковий журнал

quarterly scientific journal

ECONOMIC HERALD OF THE DONBAS

2015 № 4(42)

Економічний вісник Донбасу
Экономический вестник Донбасса
Economic Herald of the Donbas

Науковий журнал **№ 4 (42) 2015**

Заснований у 2004 році

Свідоцтво про державну реєстрацію КВ № 14442-3413 ПР видано Міністерством юстиції України 14.08.2008 року

Журнал внесений до переліку наукових фахових видань України (економічні науки).

Постанова Президії ВАК України від 14 жовтня 2009 р. № 1-05/4

Рекомендований до друку рішеннями Вчених рад

Інституту економіки промисловості НАН України (протокол № 12 від 28.12.2015 р.)

Луганського національного університету імені Тараса Шевченка (протокол № 5 від 19.12.2015 р.)

Журнал індексується українською загальнодержавною реферативною базою даних "Україніка наукова"

(угода про інформаційну співпрацю №30-05 від 30.03.2005 р. Видання включено до міжнародної наукометричної бази "Наукова електронна бібліотека E-Library.Ru (Російського індексу наукового цитування – РІНЦ)" – договір №571-09/2013 від 16.09.2013 р. Видання індексується вільно доступною системою GoogleScholar.

Засновники:

Державний заклад "Луганський національний університет імені Тараса Шевченка",

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http://www.nbuv.gov.ua/portal/Soc_Gum/Evd/index.html
http://alma-mater.luguniv.edu.ua/electronversions.htm

Economic Herald of the Donbas

Quarterly Scientific Journal

№ 4 (42) 2015

Founded in 2004

State Registration Certificate КВ No. 14442-3413 ПР issued by the Ministry of Justice of Ukraine on August 14, 2008.
The journal is included into the list of the specialized Ukrainian publications (Economics).
Addendum to the Decree of the Board of Higher Attestation Commission of Ukraine of October 14, 2009 No. 1-05/4
Recommended to publication by the decisions of the Academic Councils of the Institute of Industrial Economy of the National Academy of Sciences of Ukraine (Minutes No. 12 of December 28, 2015)
and of the Luhansk Taras Shevchenko National University (Minutes No. 5 of December 19, 2015)
The journal is included into the title list of the Ukrayinika Naukova abstract database
(Information Exchange Agreement No. 30-05 of March 30, 2005). The edition is included into the international database eLIBRARY – Scientific Electronic Library (Russian Science Citation Index) – Agreementr No. 571-09/2013.
The periodical is indexed by the freely accessible system Google Scholar.

Founders:

State Higher Education Institution "Luhansk Taras Shevchenko National University",
Institute of Industrial Economy of the National Academy of Sciences of Ukraine

E-mail: Slaval@iep.donetsk.ua
http://www, nbuv. gov ua/portal/Soc_Gum/Evd/index.html
http://alma-mater.luguniv. edu.ua/ electronversions. htm

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* All articles are published in the author's wording.

SCIENTIFIC ARTICLES

Economic Theory

UDC 657.41:330.83

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HICKSIAN INCOME AND CONTEMPORARY ACCOUNTING

The definition of income has been occupying economists' minds for centuries. Specialized literature is full of hundreds of pages on the topic. Irwing Fisher, Frank Knight, Ludwig von Mises effected the biggest impact on the understanding of the economic nature of income. The most famous concepts in accounting theory have been developed by Kenneth MacNeal, Edgar Edwards and Philip Bell, Raymond Chambers and others. Of them all, however, it is the theory of John Richard Hicks introduced in his fundamental work "Value and Capital", first published in 1939, that became the foundation of the contemporary accounting concept of income.

John R. Hicks (1904 - 1989) is a British mathematician and economist, lecturer and professor at London School of Economics, Cambridge and Oxford, winner of Nobel Prize for economics for 1971, one of the most important and influential economists of the 20th century. Hicks, in his magnum opus – "Value and Capital", introduces a range of novelties in economics. He defines for example the two effects influencing customer choice between two goods – substitution effect and income effect – something that is now regarded as a standard in demand and supply theory. He significantly expands the general equilibrium theory which he receives the Nobel Prize for. However, it is the dozen pages dedicated to the economic concept of income in his book that have the ultimate significance for the theory of accounting. They leave such a deep trace in both economic and accounting thought that the theory is now known under the name "Hicksian Income".

Paradoxically, John Hicks regards the notions of income, savings, depreciation, and investment as undefinable and vacuous. "There is far too much equivocation in their meaning, equivocation which cannot be removed by the most painstaking effort"[1], he writes. And continues: "… they are not logical categories at all; they are rough approximations, used by the business man to steer himself through the bewildering changes of situation which confront him"[2]. Zacharias (2002)[3] emphasizes that it is not at all by coincidence that Hicks develops the concept of income in chapter 14 – just before part IV, where he introduces his dynamic theory without the use of the terms income, savings, investment or depreciation. On the contrary, he does so completely intentionally as he believes that income cannot be ultimately defined and therefore each attempt would contain high level of imprecision. Hicks regards the term "theoretical concept of income" is inherently contradictive. Moreover, he advises that terms income and savings be eschewed in economic dynamics. „They are bad tools", he says, „which break in our hands"[4]. Despite all of that, Hicksian Income, as modified as it is, turned into the Theoretical accounting concept of income.

Although the financial concept for capital maintenance is pervasively spread and adopted, theory of accounting is becoming less and less interested in Hicksian Income. At the same time Hicks' theory being the foundation of the financial concept is of ultimate significance. The essence of widespread terms such as income, profit and loss cannot be fully understood without knowledge of their origin and it is to be found in the income of Hicks. This article therefore is dedicated to the concept of the economic category of income as developed by John R. Hicks. An attempt is made therein to present the theory of the British scientist and the way it was transferred to nowadays accounting knowledge. The article would not be complete without paying attention to all critics against the use of Hicksian Income.

This paper develops as follows: The next sections clarify the essence of Hicks' theory and provide practical illustration thereof. The Hicksian Income as transferred into modern accounting by IASB and FASB is presented thereafter. The major critics against the approach selected by the standard-setters are discussed at the end.

The Hicksian Income

Hicks believes that the necessity of income definition arises for the practical purpose of serving as a guide for prudent conduct only. He introduces the so called "central meaning" of the concept of income as "the maximum value which he (the individual – author) can con-

[1] Hicks, John. Value and Capital. – Oxford Clarendon Press, 1942. – P. 171.
[2] ibid.
[3] Zacharias, Ajit. A Note on the Hicksian Concept of Income. – 2002. – P. 4.
[4] Hicks, John. Value and Capital. – Oxford Clarendon Press, 1942. – P. 177.

sume during a week, and still expect to be as well off at the end of the week as he was at the beginning"[1]. The person uses the knowledge of the value of his income to plan his conduct – "when a person saves, he plans to be better off in the future; when he lives beyond his income, he plans to be worse off"[2]. The income so defined is substantially subjective as it fully depends on the person's expectations and plans.

Hicks states that business men and economists do not use in their daily activities the central meaning of income but are usually content to employ some approximations thereof. He considers that there are three approximations and calls them "Income No. 1", "Income No.2" and "Income No.3".

The concept of "Income No.1" is the simplest of the three and is based on the assumptions that, on each date of valuation, the wealth of a person is the capital value of his future receipts in money terms; that the interest rate remains unchanged for the whole period; that the person does not employ any part of his capitalized wealth on consumption. Considering those assumptions, "the income", Hicks says, "is the maximum amount which can be spent during a period if there is to be an expectation of maintaining intact the capital value of prospective receipts (in money terms)"[3]. In other words, the income shows the amount that a person can spend on consumption during the period and still be as well off at the end of the period as at the beginning. If we suppose that the person's wealth is W, his costs – C and the interest rate – r, then:

$$(W - C)(1 + r) = W.$$

After rearranging the above formula:

$$C = \frac{W}{1+r} r.$$

Or, costs are equal to the interest on the person's discounted wealth or his expected future receipts.

In so far as the income – E, by definition is equal to those costs:

$$E = \frac{W}{1+r} r.$$

"Income No.1" is relatively acceptable description of the concept of income. However, this concept is valid only when there are no expectations of changes in economic conditions. It is obvious that this is a hypothetical, fully theoretical and unrealistic environment. Hick therefore acknowledges that "This is probably the definition which most people do implicitly use in their private affairs; but it is far from being in all circumstances a good approximation to the central concept"[4].

In "Income No.2" Hicks adds the variability of the interest rate to the expectations defining income. In this case "we define income as the maximum amount the individual can spend this week, and still expect to be able to spend the same amount in each ensuing week"[5]. Using the third approximation – "Income No.3", he introduces another aspect of real economic world – changes in prices. Expecting inflation, income is defined as "the maximum amount of money which the individual can spend this week, and still expect to be able to spend the same amount in real terms in each ensuing week"[6]. Of course, Hicks acknowledges that "there is no completely satisfactory answer"[7] to the question which is the appropriate index of prices to take.

It has to be emphasized that Hicks strictly differentiates the terms consumption and spending. „… saving is not the difference between income and expenditure, it is the difference between income and consumption"[8], he writes. When a person invests in durable consumption goods, his expenditures will exceed his consumption, and on the contrary – when he consumes durable goods he already bought in the past, his consumption will exceed his expenditures. Therefore "income is not the maximum amount the individual can spend while expecting to be as well off as before at the end of the week; it is the maximum amount he can consume"[9]. Again we find the subjectivity so inherent to Hicksian Income as there is no practical measure of the level to which durable consumption goods are consumed. Such a measure would only be "a perfect second-hand market for the goods in question, so that a market value can be assessed for them with precision, corresponding to each particular degree of wear"[10]. It is obvious that such a market is only an imaginary one, i.e. definition of income depends on the personal subjective feelings of the individual for the level of his own consumption.

Hicks examines income in two dimensions, naming them *ex ante* and *ex post*. To define them he introduces the terms Prospect I and Prospect II. They describe the wealth of the individual as calculated at different points of time but from the same perspective of time. Prospect I is assessed at the beginning of the period and expresses the available resources of the indi-

[1] Hicks, John. Value and Capital. – Oxford Clarendon Press, 1942. – P. 172.
[2] ibid.
[3] ibid. – P. 173.
[4] ibid.
[5] ibid. – P. 174.
[6] ibid.
[7] ibid.
[8] ibid. – P. 176.
[9] ibid.
[10] ibid.

vidual at that time and the discounted value of the net cash flows with which he would be able to buy other consumption goods in this and the ensuing periods. Prospect II also expresses the wealth of the individual but calculated from the beginning of the second period. The individual assesses both Prospect I and Prospect II at the beginning of the first period, i.e. the same assumptions are made for both of them; they differ only by the moment to which cash flows are discounted, as Prochazka (2009)[1] points out. The difference between Prospect I and Prospect II at the beginning of the period is income *ex ante*. It fully depends on the individual's subjective expectations and assumptions. It cannot be objectively defined as each individual can assess the same wealth differently.

At the end of the first period (i.e. at the beginning of the second one) the individual already knows what has really happened. He is able to update his assessment and his expectations and to recalculate his Prospect I and Prospect II, the difference between which becomes income *ex post*. In practice income *ex post* is the realized income *ex ante*. It is an objective measure of individual's wealth as it is calculated on the basis of statistical and historical data.

There is definition of income *ex post* corresponding to each income *ex ante*, however Hicks believes that the most important is the counterpart of "Income No.1" *ex ante*, which "equals the value of the individual's consumption *plus* the increment in the money value of his prospect which has accrued during the week; it equals Consumption *plus* Capital accumulation"[2]. This "very special sort of income" has a "supremely important property" and namely – this income is "almost completely objective". However, the author places a very important limiting condition – there is objectivity only if we focus on income from property and ignore the possibility of having wealth increased or decreased due to increment or decrement of the so called "Human capital" or the abilities of the individual to earn. Taking this limiting condition into consideration, "the capital value of the individual's property at the beginning of the week is an assessable figure; so is the capital value of his property at the end of the week; thus, if we assume that we can measure his consumption, his income *ex post* can be directly calculated."[3].

Hicks believes that income's two dimensions bring different sort of information. The information about income *ex ante* is useful to the individual for the purpose of his economic decisions as it reflects his expectations for the future. On the other hand, income ex post is a mixture of historical data and assumptions for the future. On the principles "bygones are bygones"[4] Hicks expresses his belief that it is meaningless to mechanically mixing past and prospect data. Such data has its place in economic and statistic history, it is useful as a measure of economic progress. However, it cannot have any relevance to conduct, i.e. income *ex post* cannot be useful to the individual for the purpose of his economic decisions.

Illustration of Hicks's concept of income

The theory of John Hicks on the economic category of income has been briefly presented above. The critical moment for the understanding of his beliefs about income is how the individual's wealth is defined. By no doubt wealth is not a static figure for Hicks. It is equal to the discounted value of the net cash flows that the individual expects to receive in this and the ensuing periods.

Let us assume that individual's wealth W_0 at the beginning of the period is equal to:

$$W_0 = \frac{\sum_{i=1}^{n} NCF_i}{(1+r)^i},$$

where

NCF_i – net cash flow for period *i*

r – discount rate

n – time span for which W_0 is calculated

W_0 represents Prospect I from the perspective of the first period.

The net cash flow realized during the first period is known at its end; thus, the wealth of the individual at the end of the period (and at the beginning of the second one) is:

$$W_1 = NCF_1 + \frac{\sum_{i=2}^{n} NCF_i}{(1+r)^{i-1}},$$

W_1 is Prospect II from the perspective of the first period.

Income *ex ante* $I_{ex\ ante}$ equals the difference between both Prospects or:

$$I_{ex\ ante} = W_1 - W_0 = rW_o.$$

Let us examine the following example:

Mr. X expects to receive equal net cash inflows amounting to 40,000 CU[5] during the next 5 years. The market interest rate for the period is expected to be 5% and is not expected to change. The market interest rate will be used to calculate the discount factor. Cash inflows are received at the end of each period.

At the beginning of the first period Mr. X assesses his Prospect I as follows:

[1] Prochazka, David, The Hicks' Concept of Income // European Financial and Accounting Journal. – 2009. – Vol. 4, no.1. – P. 45.

[2] Hicks, John. Value and Capital. – Oxford Clarendon Press, 1942. – P. 178.

[3] ibid. – P. 179.

[4] ibid.

[5] CU – currency units.

Year	NCF	Discount factor	PV of NCF
1	40 000	0.952380952	38 095
2	40 000	0.907029478	36 281
3	40 000	0.863837599	34 554
4	40 000	0.822702475	32 908
5	40 000	0.783526166	31 341
		Wealth W_0	**173 179**

Propsect II from the perspective of the beginning of the first period is:

Year	NCF	Discount factor	PV of NCF
1	40 000	1	40 000
2	40 000	0.952380952	38 095
3	40 000	0.907029478	36 281
4	40 000	0.863837599	34 554
5	40 000	0.822702475	32 908
		Wealth W_1	**181 838**

It shall be emphasized that when calculating Prospect II the net cash flow for the first period is not discounted or is rather discounted with discount factor 1, as it is taken as already realized. Both Prospects are assessed on the grounds of the same assumptions; thus, there are no reasons to believe that the expected income for the first period will not get realized.

Having the above calculations, income *ex ante* from the perspective of the first period is:

$$I_{ex\ ante} = W_1 - W_0 = 181{,}838 - 173{,}179 = 8{,}659.$$

Income *ex ante* expresses the amount that Mr. X believes to be able to spend without reducing his wealth. If he wishes to save, he has to reduce his consumption.

Let us now assume that Mr. X realized only 38,000 CU during the first period; however, he believes that this is only a temporary shift and therefore he does not change his expectations for his future receipts. In order to determine his income *ex post* Mr. X shall perform reverse forecasting. He calculates his Prospect I from the perspective of the beginning of the first period but using the data for the realized cash flows that are already known, or:

Year	NCF	Discount factor	PV of NCF
1	38 000	0.952380952	36 190
2	40 000	0.907029478	36 281
3	40 000	0.863837599	34 554
4	40 000	0.822702475	32 908
5	40 000	0.783526166	31 341
		Wealth W_0	**171 274**

Prospect II is also from the perspective of the beginning of the first period using the information available at its end:

Year	NCF	Discount factor	PV of NCF
1	38 000	1	38 000
2	40 000	0.952380952	38 095
3	40 000	0.907029478	36 281
4	40 000	0.863837599	34 554
5	40 000	0.822702475	32 908
		Wealth W_1	**179 838**

The realized income *ex post* is:

$$I_{ex\ post} = W_1 - W_0 = 179{,}838 - 171{,}274 = 8{,}564.$$

Of course, as time passes it is usual for people to update their expectations. Market interest rate rarely maintains its level the same for many years. Economic conditions change. The individual is forced to change his plans and forecasts, thus changing the assessment for his wealth. Therefore income *ex post* could be equal to income *ex ante* only by coincidence.

Significance of Hicksian Income for theory of accounting

As it was already stated above, John Hicks regards income as an economic category that cannot be logically defined, a category without any cognitive value due to its highly subjective nature. Still, the idea of Hicksian Income penetrated into accounting knowledge and turned into a foundation.

It was Sidney Alexander (1950)[1] who introduced Hick's concept of income for the first time. Brief (1982)[2] points out that some ten years later Hicks's definition recurs with remarkable frequency in economic and especially in accounting writings. „Today", Brief continues, „whenever the income concept is discussed at a conceptual level, a reference to Hicks is likely to be found"[3]. Hicks himself remains surprised from the popularity his definition gains among accountants. In a letter addressed to Brief he wrote: „I had no idea when I wrote this chapter in *Value and Capital* that it would be taken up by accountants"[4].

The fundmentalization of Hicksian Income reaches its apogee in 2005 when IASB and FASB identify it as one of the underlying concepts to form the foundation of the future joint Conceptual Framework to be used as grounds for principle-based standard-setting.[5] Both boards clearly express their intention to place their concept of income on solid theoretical basis and found such

[1] Alexander, Sidney. Income Measurement in a Dynamic economy. – Sweet & Maxwell, 1950.

[2] Brief, Richard. Hicks on Accounting // Accounting Historian Journal. – 1982. – Vol.9, No.1. – P. 91.

[3] ibid.

[4] Brief, Richard. Hicks on Accounting // Accounting Historian Journal. – 1982. – Vol.9, No.1. – P. 98.

[5] Crook, Kimberley; Bullen, Halsey. *Revisiting the Concepts. A New Conceptual Framework Project.* IASB, FASB. – 2005. – May. – P. 7.

a basis in Hicks's definition. They modify it to overcome all its imperfections and develop it into the complete concept of income, profit and loss introduced in the Conceptual Framework published in 2010.

The two aspects changed by the Boards are the ones where the understanding of the concept of income hides – the definition of the term wealth, on one hand, and its measurement, on the other. Hicks believes that the wealth of the individual is equal to the discounted value of the net cash inflows the individual will receive in future, measured according to his own expectations – an amount that is too subjective to be appropriate for decision-making except as an unspecified and vague guide for prudent conduct.

Both boards, however, adopt company's capital as a measurement of its wealth. According to the pervasive concept of capital, capital is synonymous with its net assets or the difference between company's assets and liabilities.[1] Therefore, company's wealth is assessed by its net assets that, although being abstract figures, can be objectively identified.

The second aspect that significantly impacts the way the company's income is defined is the measurement of its wealth. One of the basic conventions that are widespread among accountants is that assets and liabilities are measured at historical cost. Other measurement bases are applicable in various cases too (current cost, fair value and so on), but in general the majority of the accounting standards from both sides of the ocean place a requirement for measuring assets and liabilities at historical cost.

In practice both boards borrow Hicks's "Income No.1" *ex post*, replace individual's wealth with the equity of the individual entity and measure it mainly at historical cost. Or, if we rephrase Hicks and complete it with the financial concept of capital maintenance[2], **company's income is the maximum amount that the company can consume so that to maintain its equity in money terms, i.e. so that its net assets at the end of the reporting period to be equal to its net assets at the beginning of the period, after deducing all changes therein due to actions of owners in their capacity of owners.** If the net assets at the end of the period exceed those at the beginning, the company has saved part of its income in the form of profit. Otherwise, it would seem that the company is not "living within its income", it consumes its reserves or simply said – realizes losses.

Critics to FASB and IASB-adopted concept of company income

The decision of both standard-setters to adopt Hicksian Income and to modify it thus making it one of the fundamental contemporary accounting concepts is opposed by part of accounting society. The boards have been accused of wrong and selective interpretation of Hicks's theory. Their definition of income is criticized for lack of objectivity; for not been useful to those who make economic decisions; for measuring only a part of company's wealth but failing to reflect its internally generated goodwill and so on. The major critics will be examined one by one below.

As it was already stated above, IASB and FASB explicitly point out their decision to step on Hicks's theoretical concept of income. Unfortunately they do not analyze it in more details in the 2005 Memorandum. Instead they focus on the substantiation of their selected "conceptual supremacy of assets"[3] and the respective definition of financial performance using assets and liabilities and not revenues and expenses. Thus, their stance definitely remains insufficiently grounded; it weakens it and opens the door to critics.

The major deficiency of the Boards' incomplete thesis is that they really approach Hicksian income in a selective manner. It is a fact that only fragments of Hicks's thoughts are presented in the Memorandum – only those that match Boards' definition. It is remarkable that the boards borrow only a part of Hicks's sentence for the almost complete objectivity of the income *ex post*, but somehow omit the limiting condition placed by the author that this is valid only for income from property but not for income that depends on the so called "human capital"[4]. Thus they give arguments in the hands of authors such as Bromwhich, Macve and Sunder (2010) to accuse them for "opportunistically cherry-picking the elements to suit their immediate objectives" and for "taking short quotations and interpreting them out of context"[5].

From pure formal point of view there is no way not to support critics. It is true that both boards address quite frugally the concept of income, mentioning it in only two short paragraphs in the whole Memorandum without placing any additional theoretical thoughts. The Memorandum, however, is not designed to contain Boards' full concept of income. It is only a prelude to the concept of income as later on developed in the Conceptual Framework. The fact that the Memorandum only implies IASB and FASB's ideas does not make their theory for income, capital and capital maintenance,

[1] IASB. Conceptual Framework for Financial Reporting. 2010. para 4.57.

[2] IASB, Conceptual Framework for Financial Reporting. 2010. para 4.59 (a).

[3] Crook,K. & Bullen,H. Revisiting the Concepts. A New Conceptual Framework Project. – IASB & FASB. – 2005. – May.

[4] ibid. – P. 18.

[5] Bromwich, M. Hicksian Income in the Conceptual Framework [Electronic resource] / M. Bromwich, R. Macve, Sh. Sunder. – 2010. – P. 2. – Mode of access: http://ssrn.com/ abstract=1576611.

all Hicksian Income-based, vacuous and does not place it on vague and ambiguous grounds. This critics is quite perfunctory and fails to account for the theoretical depth of both standard-setters' achievement.

The boards are also accused for claiming to having developed an objective concept of company's income. Critics keep on repeating that the development of an objective measure of income by stepping on such a subjective category as Hicksian income is not possible. However, by choosing the identifiable net assets as an expression of company's wealth and by applying the principle of measuring them at historical cost, IASB and FASB overcome Hicksian individual's subjective assessments. Moreover, it is Hicks himself that in a book review published in Economic Journal (1948) explicitly emphasizes the necessity of objectivity in accounting to be achieved by applying historical cost. In fact throughout his all work thereafter Hicks consistently takes the stance that the principle of measurement at historical cost shall be strictly observed. Even talking about companies' equity measurement at the 1969 meeting of the International Statistical Institute Hicks states: "An economist may often be found to declare … that the stock of capital equates to the present discounted value of the future stream of earnings that the stock of capital will generate. This is so inherently unmeasurable that it will amuse a statistician until he perceives that the suggestion is offered somewhat more than half-seriously"[1].

Critics also argue that Hicks clearly declares his opinion that it is only income *ex ante* which could be useful for the individual's future conduct, while income *ex post* could be of interest only to historians and statisticians but not to those who have economic decisions to make. For them income *ex post* is useless. Consequently, IASB and FASB's concept of income developed on the grounds of Hicksian Income No.1 *ex post*, cannot be relevant to anybody.

At the same time, there is a vast number of empirical research papers proving the direct relation between accounting information about company's earnings and its stock prices market changes. For instance, Dechow (1994) points out that "stock markets are efficient in the sense that stock prices unbiasedly reflect all publicly available information concerning firms"[2], and yet "they react to the release of earnings information and to forecasts of earnings" [3]. Dechow quotes the empirical research of Foster, 1977 and Patell, 1976, that find strong positive correlation between companies' accounting net income and their stock prices. The author concludes that "the production of financial information such as earnings is an integral part of price formation[4].

The main objective of financial reporting as set forth by the two standard-setters is to prepare and present such financial information that is useful for its users. Of course, therefore it shall comply with a number of qualitative requirements enlisted in the Conceptual Framework – relevance, faithful representation, comparability, verifiability, timeliness, understandability, and shall be prepared observing all requirements of the respective standards. Whenever financial information meets those requirements, it is useful. Many empirical researches have confirmed this by proving the direct link between income information and stock prices changes at international stock exchanges. It is the practice that refutes the opponents of the relevance of the concept of income.

The boards have also been accused that their defined income fails to encompass all that a company generates, and especially that it misses company's internal goodwill. Bromwhich, Macve and Sunder (2010) point out that the difference between market capitalization of a company and the book value of its net assets is defined as internally generated goodwill which depends on the skills of the management of this company. They argue that different managers with different management skills will achieve different return on the same capital. They believe that this is Hicks's "human capital" at company level – "the value of super profits over the normal rate of return on net assets that depends on the skills with which management and the workforce exploit an enterprise's resources and its markets, and its business, social and political opportunities"[5].

This accusation shall also be refuted even only for the reason that the boards are criticized for something they do not purport to aim. IASB and FASB does not regard financial information and especially the one concerning company's income that is contained in the general purpose financial reports as a tool showing the value of the reporting entity. The Conceptual Framework explicitly states that "General purpose financial reports … provide information to help existing and potential investors, lenders and other creditors to estimate the value of the reporting entity"[6]. Besides, the information about company's income is pervasively used as a measure of the stewardship of management. Quite often senior management bonuses are linked to company's performance measured by accounting financial results.

[1] Brief, Richard. Hicks on Accounting // Accounting Historian Journal. – 1982. – Vol.9. No.1. – P. 97.

[2] Dechow, Patricia. Accounting earnings and cash flows as measures of firm performance. The role of accounting accruals // Journal of Accounting & Economics. – 1994. – Vol.18. – P. 12.

[3] ibid. – P. 14.

[4] ibid.

[5] Bromwich, M. Hicksian Income in the Conceptual Framework [Electronic resource] / M. Bromwich, R. Macve, Sh. Sunder. – 2010. – P. 7. – Mode of access: http://ssrn.com/abstract=1576611.

[6] IASB, Conceptual Framework for Financial Reporting. 2010. para OB7.

Hicksian Income is not directly applied in modern accounting when defining earnings. However, Hicks's contribution to the development of our nowadays understanding of income and profit cannot and shall not be denied. In practice, IASB and FASB stepped on Hicksian Income and then developed and modified it. The understanding of income presented by both boards in the Conceptual Framework is not just a borrowing from Hicks. It is a completely mature and applicable in practice accounting theory of income. The main contribution of John Hicks is that he directed our focus towards the concept of capital maintenance as grounds for defining concept of financial performance. John Hicks is a remarkable scientist that left deep trail in economics. His thoughts about concepts of income and objectivity penetrated the theory of accounting and turned into a foundation for the further development of the science.

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Петрова В. Теорія прибутків Дж. Хикса і сучасного бухгалтерського обліку

Стаття присвячена поняттю доходу в теорії одного з найвпливовіших економістів XX століття – Джона Річарда Хикса, який залишив глибокий слід в теорії бухгалтерського обліку. Його ідеї представлені і проілюстровані як теоретично, так і практично. Проаналізовано як вони були трансформовані в сучасному бухгалтерському обліку в МСФЗ і РСФО. Критика використання теорії доходу Хикса як теоретичної основи поняття доходу, прибутку і капіталу представлені як концептуальні основи фінансової звітності і також обговорюються в статті.

Ключові слова: доход, сучасний бухгалтерський облік, прибуток, капітал.

Петрова В. Теория доходов Дж. Хикса и современного бухгалтерского учета

Это статья посвящена понятию дохода в теории одного из самых влиятельных экономистов XX века – Джона Ричарда Хикса, которая оставила глубокий след в теории бухгалтерского учета. Его идеи представлены и проиллюстрированы как теоретически, так и практически. Проанализировано как они были трансформированы в современном бухгалтерском учете в МСФО и ССФУ. Критика использования теории дохода Хикса как теоретической основы понятия дохода, прибыли и капитала представлены как концептуальные основы финансовой отчетности и также обсуждаются в статье.

Ключевые слова: доход, современный бухгалтерский учет, прибыль, капитал.

Petrova V. Hicksian Income and Contemporary Accounting

This article deals with the concept of income of one of the most influential economists of the 20th century – John Richard Hicks, which left deep trails in the theory of accounting. Hick's ideas are both theoretically presented and practically illustrated. The way they have been transferred to modern accounting by IASB and FASB is analyzed. The criticisms of the use of the Hicksian income as a theoretical foundation of concepts of income, earnings and capital maintenance as adopted by the Conceptual Framework for Financial Reporting are also discussed in the article.

Keywords: income, modern accounting, earnings, capital.

Received by the editors: 15.11.2015
and final form 28.12.2015

UDC 338.24.021.8(470)

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THE BIG-BANG STRATEGY AND NON-RATIONAL BEHAVIOR IN THE RUSSIAN TRANSITIONAL ECONOMY IN THE 1990s

1. Introduction

The Neoclassical Economics – which is the dominating form of Mainstream Economics – believes in the "goodness" of the market economy – as opposed to the planned one – because it generates both microeconomic efficiency (in terms of optimal allocation of scarce society's resources) and macroeconomic performance (in terms of full employment, the general price level stability and both high and steady economic growth). Therefore, mainstream economists advocated the Big-Bang (BB) or the Shock Therapy rather than the Gradualism (GR) strategy of transition from the planned economy to the market one. According to their point of view, the quicker such transition will take place, the better. The planned economy means microeconomic inefficiency (waste of resources etc.) and bad macroeconomic outcomes (low productivity etc.). It is necessary quickly to break the old system and simultaneously implement all desirable policies: price liberalization, privatization, financial stabilization (it is an essence of the BB). And then economic freedom for everybody will rapidly give optimal outcomes.

The reasoning about both the "goodness" of the market economy and the necessity of the BB (explicitly or, sometimes, implicitly) is based on the assumption that economic agents (first of all, households and firms) always and everywhere maximize their objective functions. They are optimizers. In other words, the Neoclassical Economics is based on the fundamental idea of the Substantive Rationality (Lavoie 1992, P. 51). According to Lah and Susjan (1999, P. 589): “Within the framework of substantive rationality, the conditions and constraints for the rational behavior of economic agents (utility or profit maximization) are external, that is, determined and given in their environment. According to Herbert Simon, such behavior is determined entirely by the characteristics of the environment in which it exists. However, these characteristics have to be known. The concept of substantive rationality therefore assumes that economic agents make their decisions (based on complex mathematical calculations) in an environment of perfect information.

However, the reality does not allow economic agents to be optimizers always and everywhere. There are serious problems of both uncertainty of the future and information overload (Hodgson 1997; Lah and Susjan 1999). As Lavoie (1994, P. 543-544) has pointed out: “In the real world, in contrast to neoclassical models, agents lack perfect knowledge and the ability to process a large amount of information. They generally lack confidence in their information and their assessment of it. The substantive rationality of neoclassical models can be neither a guide nor a description of decision making” (see also Lavoie, 2006, ch. 1).

These problems play important role in the developed market economies (see the Section 2) and can destabilize the transition ones (the Section 3) by means of adverse effect on the behavior of both households (the Sections 4 and 5) and firms (the Section 6). Therefore the presence of such problems itself can be the base for the fundamental objections to the BB mode of transition to the market economy (see the conclusive Section 7).

2. The Informational Obstacles to Rational Behavior in the Developed Market Economy

The presence of obstacles to rational behavior in the developed market economy has been broadly recognized in the Heterodox Economics, especially in the Post Keynesianism (Lavoie 1994; 2006; Davidson 1996) and Evolutionary Institutionalism (Hodgson 1994; 1997). The point is that optimizing behavior can take place only if there is a correspondence between the cognitive possibilities of agents and the information set. If information stock is very big or complex or if agents have no relevant data at all (Hodgson 1997), they cannot behave rationally in the Neoclassical fashion and are forced to develop various ways dealing with these difficulties. Such behavior is consistent with so-called Procedural Rationality (Lavoie 1994, P. 544): “Such approach to rationality, in cases of uncertainty or of insufficient capabilities to process existing information, consists of means to avoid complex calculations and considerations, and of procedures enabling decisions to be taken despite incomplete information. Agents follow procedures that are sensible given their bounded knowledge and computational capabilities”.

It leads to institutional evolution. In other words, households and firms develop diverse informal institutions in order to solve the problems of both information overload and uncertainty of the future. These informal institutions include habits and rules of thumb, moral rules, entrepreneurial culture, long-terms links between industry and banking etc. (Lah and Susjan 1999; Tsang 1996; Lavoie 2006) Such devices create what I would like to call the "stabilizing frameworks". The "stabiliz-

ing frameworks" are those elements of the economic system, which provide favorable environment for making sensible economic decisions (i.e. eliminate any extremes of the information problems). The important point is that economic evolution requires "smooth additions" to the "stabilizing frameworks". For example, the transition from the craft production system to the mass production one requires the "framework" in the form of "mass marketing" (Nell 1998, P. 232-233), and the emergence of endogenous inside money requires the "framework" in the form of the Central-Bank-As-A-Lender-Of-Last-Resort (Minsky 1986).

Without such "frameworks", economic system would collapse in complete chaos. Destruction of some of these "frameworks" can be very harmful for economic system. That is why, for example, Keynes rejected the decrease in the money wage level as a means of struggle against unemployment because according to his view contracts fixing money wage are one of the important stabilizers (Keynes 1936, ch. 19, 20; Davidson 1972; 1999, P. 583).

3. The Informational Obstacles to Rational Behavior in the Transitional Economy: The General Perspective

The transitional economy as the system moving from the "planned socialism" to the "market capitalism" is by definition is characterized by shift in its institutional bases. Such shift itself leads to enormous obstacles to rational behavior. However, the situation becomes worse when the BB takes place because such strategy means not shift but break in the institutional base of the economic system. The "institutional hiatus" (Kozul-Wright and Rayment 1997) takes place: old institutional frameworks have already destroyed, but new ones have yet not created. We have no Schumpeterian "creative destruction" under the BB; we have only "destroying destruction".

The obvious example is the transitional economy of Russia in the 1990s. In 1991, this country had still some analogue of the planned economy. The 1992 year was first year of the BB reforming. The outcomes were the following: privatization without rules of law, price liberalization without workable competition, the government refusal from enterprise administration and control without emergence of efficient entrepreneurship and management, advertisement of "luxury life" without introduction of moral rules of civil society, etc. The result was economic and legal chaos in the form of both enormous information overload in the sphere of consumption decisions and extreme uncertainty in the sphere of investment and portfolio decisions (the same informational problems appeared in other transition economies, for example, in Slovenia - see Lah and Susjan (1999)). The point is that these information problems did not permit agents to be consistent in their behavior not only with the Substantive Rationality, but also sometimes even with the Procedural Rationality (i.e. there were cases without individual *deliberate* choice at all). It led to adverse both microeconomic and macroeconomic consequences. In order to describe such consequences we will divide all Russian economic agents into three broad categories: "poor households" (the "typical Post-Soviet Russians"), "rich households" (the "New Russians") and "firms". It seems to us that this taxonomy is very useful because it is true indicator of the behavioral structure in the Russian economy in the 1990s (although often two last groups could be treated as the same, because some firms are controlled by the "New Russians"). We will trace the influence of the BB on behavior of each of these groups of people and show why they all could not behave rationally.

4. The Informational Obstacles to Rational Behavior of the "Poor Households"

"Poor households" are typical Russian people, which became very poor after the BB reforming. In the 1990s many such agents had income which was less than "minimal consumption bundle". It means that they were on the lowest level of famous «Maslow pyramid»: they hardly satisfied their physiological needs. We believe that the main types of decisions of this category of agents - consumption/saving and portfolio ones – had made in the conditions, which are very adverse to rational behavior. The consumption decisions were making in the situation of both massive inflow of imported goods with unknown quality and characteristics (Lah and Susjan 1999, P.593-600) and (as I already mentioned above) extremely low income without access to external finance, that is, very hard budget constraint. Furthermore, that typical Russian people had no "consumption culture" and (this is very important) custom and experience of making economic choices, because the planned economy of shortage (Kornai 1980) was the economy of almost total rationing which, to some extent, excludes free choice.

All these aspects are reasons for both information overload in the sphere of consumption decisions and non-rational behavior of Russian people in this sphere. Both surveys and economic intuition show that many consumption goods purchases had completed on the base of aggressive advertisement pressure or just emotions. The "lightning" calculations "of pleasures and pains" (Veblen 1898, P. 389) were often completely absent. Sometimes these agents could not take into account any benefits and costs of their decisions because they were not to able to collect and to understand relevant information or because this information was too complex for them (the problems of Extensiveness and Complexity as the two kinds of information overload - see Hodgson 1997, P.668-671). It is obvious that such decisions were very far from optimal ones.

In the sphere of portfolio decisions, poor households faced with another general information problem - uncertainty. Various financial companies offered extremely high returns for own shares, stocks, bonds, papers and so on. The households had no both knowledge and experience of "working on" with financial instruments. As a result, enormous quantity of Ponzi-finance-using financial companies had emerged and made a lot of money, not as an effect of adverse macroeconomic dynamics (Minsky 1986; Nishi 2012), but as an effect of non-rational behavior of many typical Russian households.

Non-rational behavior of typical Russian households can be well explained by Keynes's conception of "conventional judgement" (Keynes 1937). In conditions of uncertainty, some agents follow other agents, and the "orientation on average opinion" took place. The optimistic mood of this "average opinion" was very long supported by aggressive mass media advertisement of many lucky financial companies. The results were enrichments of some cheating minority of agents, the huge loss of money of majority of other ones, and fundamental absence of trust and confidence of people to financial markets.

We suppose also that another important behavioral reason for it was mix of very low income and the Russian traditional desire "to get all at once". For many people purchase of "junk papers" of companies like MMM was the only trial of quick run away from misery. Some people who had bought such "securities" in the beginning of expansion of "pyramids" have really escaped from misery.

These consequences could be nil if the freedom of financial markets would appear slowly. Even the experience of advanced countries shows that stock markets often destabilize the economy (Singh 1995, P.104).

It should not to forget that the Soviet economy was system without financial markets. Therefore, the most participants of the transitional financial markets in Post-Soviet Russia had no skills for rational decision-making (Rozmainsky 2010).

The emergence of financial markets without normal private sector and rules of law was one of the mistakes of the BB strategy and led to mass cases of non-rational decision-making and, as a consequence, to non-optimal decisions. Now, twenty years later, both the backwardness of financial markets and lack of confidence of the most Russian households to these markets are serious obstacles to steady economic growth in Russia.

5. The Informational Obstacles to Rational Behavior of the "Rich Households"

The budget constraints of the "New Russians" were not so hard. However, all other reasons for non-rational behavior took place. Moreover, there was one "additional" one: the "group pressure". In other words, the consumption decisions of the "New Russians" were directed by very strict requirements to their "life-styles" as the "Rich People". The phenomenon of "Conspicuous Consumption" described by Veblen (Mouhammed 1999, P. 596; Trezzini 2011, P. 503; Kapeller and Schutz 2015, P. 53-55) took place in all its completeness. Both surveys and economic intuition show that many purchases of the "New Russians" were the result of the desire to be in accordance with the "life style". However, it is not substantive rational behavior because such one means independent, atomistic choice of purchased item. Perhaps, the formation of the "class" of the "New Russians" with closed structure and strict requirements to consumption was itself an effect of the BB. The point is that in the conditions of both inflow of mass of new imported goods ("invasion of Western goods" - see Lah and Susjan 1999, P. 594) and absence of normal life styles (in general and consumption patterns in particular) created by slow evolutionary way, such patterns have rapidly embodied in distorted forms.

By the way, such behavior was harmful for macroeconomic performance because goods forming "life-styles" of the "Rich People" are at large foreign. It means that described consumption culture of the New Russians encouraged economic growth abroad but not inside the country. These consumption patterns are one of the long-term reasons for general economic backwardness of the Post-Soviet Russia (this backwardness is so evident since 2014). Possibly, if behavior of rich households would be more rational that their consumption pattern would be more preferable for the domestic macroeconomic performance and steady economic growth not based on rising oil prices.

6. The Informational Obstacles to Rational Behavior of Firms

The Russian firms faced with the informational obstacles to rational behavior in the sphere, which is "conventionally" interested for Heterodox Economics, especially Post Keynesianism. This sphere is the fixed capital investment decisions.

We cannot say about it something radically new. The idea of the negative influence of uncertainty of the future on fixed investment is the common theme in many heterodox books and articles, especially of Post Keynesian authors (Keynes 1936, ch.12; Davidson 1972; Minsky 1986; Rotheim 1999; Lavoie 2006). We already mentioned above that the BB have generated extreme uncertainty of the future. In this environment, the Russian firms had no any bases for sensible investment decision-making. It was not very surprising (at least, for Heterodox Economists) that collapse of fixed investment had appeared.

However, there is reverse side of the story about influence of uncertainty on behavior of firms in the Russian economy. The environment characterized by impossibility of exact calculations created incentives for various “shadow” and "black" activities ranging from trials to hide tax payments to real criminal acts. In other words, many Russian firms were engaged in the 1990s in diverse forms of the "shadow economy". The Russian Capitalism of the 1990s was emerged as the Criminal Capitalism. According to some data, in 1992 and 1993 the amount of illegal appropriation of wealth in Russia by private agents was equal to 75-80% of GDP; in 1996 (when law framework became already a little more clear) it was equal to 12-15% of GDP (Shmelyov 1997). It is not surprising that now both businesses of many influential Russian actors have criminal origin, and some actions of the Russian governmental officers violate (international or domestic) law.

The very important thing is that criminal and other shadow and black activities require adequate finance for itself. The transactions with heroin or simple bribe are usually not financed by bank money. Agents want to have means of financing which allow to hide activity from the "third parties". Such means are cash, barter and "non-payments" (arrears). These means - unlike bank money - are anonymous. That is why the Russian monetary system of the 1990s had been characterized by displacement of bank money by cash, barter and non-payments (Rozmainsky 2014). Although in 1999 – 2001 the problem of barter and arrears was solved (by both rapid economic recovery and some decisions by Primakov’s government), big share of cash in total money supply remains structural weakness of the Russian monetary system. Furthermore, during the 1990s the Russian economy was significantly demonetized. In turn, demonetization is the "public bad" because, to some extent, it led to disintegration of the unified economy, its transformation into big quantity of weakly linked «islands». This problem is actual for the Russian economy so far.

The roots of all these problems are in the beginning of 1990s when the BB reforming led to the situation that shadow activities became both economically appeal and morally not bad. It seems that slow evolutionary transition would hardly generate such consequence.

7. Conclusion

The GDP of the Russian economy during the 1990s have fallen more than twice, and the level of real fixed capital investment in 1999 was less than 25 percent of this level in 1990. These are indicators of very bad macroeconomic performance of the economy in these years and, of course, the big mistakes in reforming it. Today we can see incarnations of consequences of these errors in, for example, very outdated and obsolete equipment of many Russian enterprises (the average age of industrial fixed capital was more than 20 years in 2004, and later data are not published at all). Why was shock so great?

Mainstream economists stressed importance of political struggle against reforms and so on. It seems to us that the fundamental mistake is the chosen mode of reforming: the BB. This paper have showed that the BB means rapid breakdown of old institutional system without creating new one. It leads to great informational obstacles to rational behavior. Economic agents cannot behave not only according to the Substantive Rationality, but also sometimes even according to the Procedural Rationality. It means that economic actions often were not based on the rational decision-making process and were driven by emotions, advertising, group pressure etc. We have demonstrated that in the sphere of consumption decisions agents either followed emotional shifts and pressure by advertising ("poor households") or tried to be in accordance with requirements of their narrow social group ("rich households"). In the sphere of portfolio decisions, many holders of financial assets were fooled by financial companies. These cases of cheating were due to non-rational and often just stupid behavior. In the investment sphere, because of uncertainty many firms replaced fixed investment by engagement in the “shadow” and "black" activities. All these decisions and activities were both effect of informational obstacles to rational behavior and cause of both microeconomic inefficiency and bad macroeconomic performance of the Russian economy in the 1990s.

It is necessary to understand that the illusions of the Substantive Rationality are misleading: agents cannot optimize always and everywhere. But they can make sensible decisions (Davidson 1991), both recognizing the limits to their cognitive and calculating possibilities and using various informal institutions (links between industry and banking, brand-loyalty, guarantees, rules of thumb) in order to deal with the different informational problems. The point is that these institutions - or as I called them "stabilizing frameworks" - are the result of slow evolutionary development. They cannot be created during, for example, a one week. It means that successful transition from the planned economy to the market one takes also a lot of time and requires many stages. In other words, the GR would be more efficient and effective means of transition than the BB.

To 1999 – 2001, some "stabilizing frameworks" had been created. We could speak about some long-term relationships between some enterprises and some banks, about the cases of defense of consumer rights, about the presence of (although very imperfect) system of property rights and so on. It was one of the causes of the fact that since 1999 the Russian economy became to expand and seemed successful until 2008.

Unfortunately, rooted traditions of non-rational behavior allowed prevented to create in Post-Soviet Russia efficient institutional environment, which is favorable to

economic growth. Lack of it can be visible especially after both fall in prices of oil and radical political decisions in 2014. We suppose that – unlike many "liberal-oriented" thinkers – one of the causes of non-rational behavior was the BB. The paper argues that such reforming was extremely expensive!

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Розмаїнський І. В. Стратегія великого поштовху і нераціональна поведінка в российській перехідній економіці в 1990-ті роки

У статті висувається гіпотеза про те, що стратегія великого поштовху (шокової терапії), яка застосовувалася в 1990-ті роки для реформування російської економіки підвищила ступінь нераціональності поведінки пересічних російських громадян. Справа в тому, що для повністю раціонального прийняття рішень необхідно, щоб людина не стикалася ні з нестачею інформації, ні з інформаційним перевантаженням. Радикальний «перехід до ринку», нав'язаний стратегією великого поштовху, посилив обидві ці перешкоди для раціональної поведінки. З одного боку, радикальні реформи підвищили ступінь невизначеності майбутнього. З іншого боку, ці реформи привели до того, що пересічні громадяни зіткнулися з великою кількістю складної для сприйняття інформації, в першу чергу, на товарних і фінансових ринках. Поточні соціально-політичні та економічні проблеми сучасної Росії пов'язані, зокрема із низьким ступенем раціональності поведінки багатьох її громадян. Коріння цього – в тому числі й в стратегії великого поштовху початку 1990-х років.

Ключові слова: стратегія великого поштовху, шокова терапія, нераціональна поведінка, невизначеність, інформаційне перевантаження, неортодоксальна економіка.

Розмаинский И. В. Стратегия большого толчка и нерациональное поведение в российской переходной экономике в 1990-е годы

В статье выдвигается гипотеза о том, что стратегия большого толчка (шоковой терапии), применявшаяся в 1990-е годы для реформирования российской экономики, повысила степень нерациональности поведения рядовых российских граждан. Дело в том, что для полностью рационального принятия решений необходимо, чтобы человек не сталкивался ни с нехваткой информации, ни с информационной перегрузкой. Радикальный «переход к рынку», навязанный стратегией большого толчка, усилил оба эти препятствия для рационального поведения. С одной стороны, радикальные реформы повысили степень неопределенности будущего. С другой стороны, эти реформы привели к тому, что рядовые граждане столкнулись с большим количеством сложной для восприятия информации, в первую очередь, на товарных и финансовых рынках. Текущие социально-политические и экономические проблемы современной России связаны, в частности, и с низкой степенью рациональности поведения многих ее граждан. Корни этого – в том числе и в стратегии большого толчка начала 1990-х годов.

Ключевые слова: стратегия большого толчка, шоковая терапия, нерациональное поведение, неопределенность, информационная перегрузка, неортодоксальная экономика.

Rozmainsky I. V. The Big-bang Strategy and Non-rational Behavior in the Russian Transitional Economy in the 1990s

The paper offers the following hypothesis: the Big Band (Shock Therapy) strategy of the 1990s in Russia has led to more non-rational behavior of the ordinary Russian people. The point is that in order to make completely rational decisions a person needs avoid both lack of information and information overload. Radical “transition to the market system” by means of the Big Bang strategy had reinforced both these obstacles to rational behavior. On the one hand, radical reforms had increased uncertainty. On the other hand, due to these reforms ordinary Russian people faced with big amount of information which was complex for perception, first of all, on goods and financial markets. The contemporary social, political and economic problems of Russia are concerned, in particular, with low degree of rationality of many its citizens. Roots of it are, among others, in the Big Bang strategy of the 1990s.

Keywords: the Big Bang strategy, shock therapy, non-rational behavior, uncertainty, information overload, heterodox economics.

Received by the editors: 24.11.2015
and final form 28.12.2015

UDC 334.021:338.001.36

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OPERATION OF A BUSINESS ENTITY IN THE CONTEXT OF GLOBALIZATION

Problem statement. In the period of globalization of economic processes one of the significant roles in development of business entities is played by external factors that influence determination of their development lines and the choice of strategic aims as regards economic upturn, and also corresponding coordination of a business mission with the targets of competitive and consumer environment on different levels of economic performance. Besides, at a fast pace of technological innovation, in order to determine clear benchmarks and provide steady development for a business entity it is essential to envisage the processes of integration of the national economy into the united international economic system.

However, the development of business entities in national economy, in particular in Ukraine, is carried out within the frame of the economic policy which is formed and provided by the state. That is why negative developments in the given economic system are not only the consequence of the world's financial and monetary crisis and serious political and economic instability in the country, but also the reflection of internal problems which, to a wide extent, have been provoked by inadequate decisions of the regulatory bodies. Under such conditions business entities are disoriented in selecting, setting and implementing their goals, and also in using the most efficient mechanisms for their achievement. All that determines disproportionality and rigid pragmatism (up to inappropriateness) of a business entity economic ambitions as concerns setting own goals and making a system of methods, means and stimuli of their achievement in the frame of operation of the economic system of Ukraine and the international system in general.

Military activities, which are taking place in the east of Ukraine, have displayed and aggravated all shortcomings of the state policy regarding control of the national economy. In particular, the absence of practical solutions to the issues of the support of business activity in Ukraine and creating supportive environment for its growth has triggered the process of negative investment. In turn, the absence of state priorities in the economy development and long-term programs of its achievement as well as instability in the world and domestic economies and, correspondingly, irregular demand for exportation have resulted in significant deterioration of common rates and business activity in Ukraine. Thus, according to the official figures of the Ministry of Finance of Ukraine over the period between 2005 and 2015 inflation rate in Ukraine reached 403.9% [1]. Along with this, in 2005 one US dollar was equal 5.3042 hryvnas, and in 2015 it was 25.555 hryvnas. The value of the hryvna against the dollar dropped by nearly 5 times [2; 3].

Such rates of the national economy lead one to think about the efficiency of the strategic management employed in defining development lines of the country's economy in general and business entities in particular. In this respect, along with the absence of state priorities, there is a need of identifying negative factors which get in the way of carrying out development strategies and efficient development of national economy and business entities as its indispensable element.

Analysis of the latest studies and publications. Although there are a great many studies devoted to forming a development strategy of business entities, and also the issues, connected with the theory and methodology of strategy making and organizing strategic management at a company, have been worked out profoundly, specific external environment effects and response formation of business entities in the period of globalization are unique. As a consequence, it becomes essential to establish theoretical aspects of the given problem and methodological approaches which allow

business entities to create mechanisms of efficient confrontation with negative effects of external environment and successfully operate with regard to the real condition under economy globalization, as well as make their own strategy for more or less distant perspective.

Certain theoretical and methodological aspects of the above-noted range of problems have been reflected in the works by a number of domestic authors: V. Lyashenko, Y. Kotov [4], A. Blagodarny, A. Tolmacheva [5], V. Khobta, O. Popova, A. Meshkov [6], V. Dementyev, V. Vishnevskiy [7], I. Bondareva, S. Kravchenko [8], N. Dalevskaya [9], etc.; by Russian scholars: O. Vikhanskiy, L. Goncharenko [10], A. Zaritskiy, G. Kleiner, etc.; and also by representatives of foreign schools: D. Boddy, H. Mintzberg, M. Porter, A A. Strickland, K. Payonk, P. Lees, I. Mazurkevich [11], etc.

Outline of unconsidered parts of the general problem. In their works these scholars have conducted a profound research of various aspects of strategy and strategic management. The impact of the external environment on the behavior of a business entity has been looked into. The influence of different factors on the investment climate has been analyzed. Nevertheless, changes in the external environment of business activity set nonstandard tasks which make one find new approaches and methods of problem solution as regards determination of strategic priorities of a business development in the context of globalization and efficient formation and realization of a business entity strategy.

The aim of this article is to study conditions of business entity operation and to define priorities of its strategic development in the context of global changes of external environment, since achievement of any keynote has its own value. Besides, the efficiency of achieving sub-goals and an ultimate goal predetermines long-term prospects of business entity activities. In this context, of special interest is theoretical and methodical base of making the strategy with a coordinate system of priorities relevant to the conditions of external and internal environment of a company.

Presentation of the baseline of the study. According to the aim of this article, it is important to clarify the concept of strategy in order to clearly realize both recital and process component of the given economical category. It should be noted that there is no major difference in interpretation of the concept of strategy among different authors. The most complete definition is given by O. Vikhanskiy. Here strategy *(*after Greek *strategia: stratos* - army + *ago* - am leading*)* is defined as "long-term properly determined line of development of an organization as concerns the area and forms of its activity, system of relationship within the organization as well as the position in the environment which leads the organization to its goals".

In the above-noted definition the emphasis is laid on a line of development being long-term. However, selected lines of development and a company's priorities can change. That can be specified by both external and internal factors which influence strategy making or force a business entity to take certain actions. Besides, as stated above, changes in external environment can either directly or indirectly affect the change of strategic directions of activities of a business entity up to the change of the mission, that is, up to the main business goal.

Consequently, it is reasonable to consider development strategy of a business entity in its operating behavior in changing external environment as a direction with emphasizing priorities in goal achievement and realization of certain management functions under changeable environment in order to improve quantity and quality characteristics of a business activity results. This definition includes resource component in strategy making, as it is the options available for use by a business entity which are as a rule limitative while choosing means and methods of a business development. [5, p 30-37].

As concerns inner potential of a business entity, its entrepreneurial ability should be noted in the first place. However, this ability can come out under certain conditions of external environment. Among the others, it is a case of motivation.

Under conditions when over the period of 10 years the national currency depreciates by 5-6 times, and capitalization of businesses reduces to zero value (we have in mind the east of Ukraine 2012-2016 yrs.) with no real responsibility taken for that by any body of power and its representatives, including oligarchs-monopolists, motivation to create and operate businesses as it is will tend to zero. Conversely, in the countries with advanced economy, chances for force majeure situations to occur are minimal, which attracts investors and to a certain degree stimulates business development.

Of no less importance is the fact that the countries situated in border territories of adversarial economic systems of global scale are more vulnerable and any moment can become a foothold for a showdown between imperialistic neighbors. Nevertheless, there are a lot of examples of the confrontations of this kind in history, such as: Cyprus, Korea, Singapore, Israel, Japan, etc. The governments of these countries, in due course, had their priorities straight as for choosing the vector of development, thus, making it possible to form national security system.

One can assume that determination of strategic priorities of development is based on national security of the country, tax climate favorable to business development and integration with the global political and economic system. Then, it will be of vital concern for business entities in countries with emerging economy to think on a mega-scale in order to accelerate processes connected with integration of the national economy into the international economic system.

Taking into account strategic benchmarks of development, businesses should set their mission correlating it on different levels of operation of the world economic system. It is not the case of affiliation as an extreme measure of integration, on the contrary, it is about finding own place in the global system on different levels of cooperation. In view of this, a business entity mission, while making a strategy and setting goals, should be established with regard to the influence of the external environment not only of the regional and national level, but also of the global one [5, p 30-37].

Based on strategic benchmark directions, goals of a business entity are set in accordance with their functions, content and formation principles in the context of globalization (fig. 1).

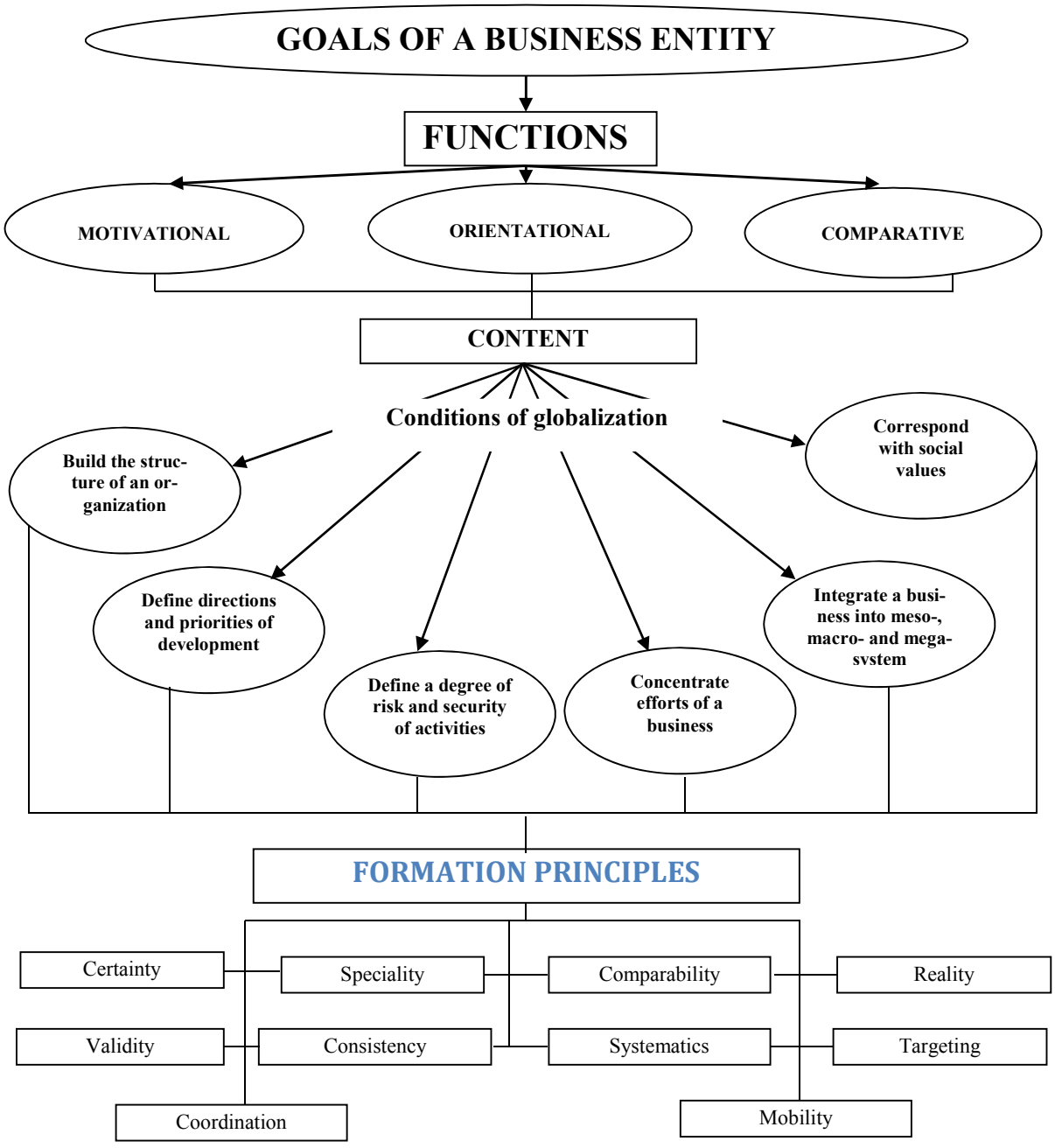

Fig. 1. Goals of a business entity: value, content, formation principles (in the context of globalization)

Source: prepared by the authors.

Among directions of strategic planning, inclusive of the ones on a global scale, a range of the following benchmarks of development can be noted (tab. 1).

Based on strategic benchmark directions goals of a business entity are set in accordance with their functions, content and formation principles in the context of globalization (fig. 1).

Table 1

Strategic value orientation of a business development

Value type	Value category	Goal characteristics
Theoretical	Facts, knowledge, rational thinking	Long-term research and projects
Economical	Usability, utility, capital accumulation, changeability	Growth, profitability, results
Political	Power, recognition	Total capital amount, volume of sales, number of employees
Social	Good fellowship, absence of conflict, acceptance of multiculturalism	Social responsibility, friendly atmosphere within organization
Esthetic	Stylistic harmony, content, shape and symmetry	Product design, quality, appeal
Scientific	Scientific potential	Patenting and research intensity
Ethical	Coordination with the surrounding environment	Ethics, moral issues

Source: prepared by the authors.

Considering the development of entrepreneurship, it should be noted that there are fundamental differences of strategic goals, mission and opportunities of large and small business. Table 2 identifies the key success factors of small and large businesses. In this study it is assumed that the medium business is a symbiosis of qualitative characteristics of two significantly different scales of business.

Mathematically the indicator of strategic development of an enterprise (*SDE*) can be represented in money terms by the total cash flow for the *n-th* number of years and the value of the same business on the stock market in the *n-th* year (*MC*), and *SDE* calculation formula will look as follows:

$$SDE = \sum_{i=1}^{n} CIF_i + MC_n . \qquad (1)$$

Consequently, with wrong strategic benchmarks chosen and the peg to the national currency which can depreciate due to the absence of cooperation between the national economy and the economic system of the developed countries of Europe and the USA, motivation for a business entity (*Mo)* will tend to its minimum with *SDE* indicator tendency to zero value:

$$Mo \to \min , \text{ if } \quad SDE \to 0 . \qquad (2)$$

Thus, while defining strategic priorities, a business entity will in the first place focus on such external factors as political and economic strength and security, business-friendly tax climate, responsibility on the part of the government for possible force majeure.

Table 2

Comparative analysis of key factors of success of economic activities of large and small business entities

Large businesses		Small businesses
Capital accumulation, capacity to withstand an economic downturn using own resources	KEY FACTORS OF SUCCESS	Structure flexibility, which leads to swift reaction to changes in economic environment
Possibilities to attract substantial investment and realization of capital and science intensive business activities		Possibility of sole proprietorship, which increases the level of responsibility and commitment in the eventual outcome
Availability of reserve resources to meet changes in external environment		Direct link between a proprietor and a management entity, which reduces time between a decision making and an activity itself
Effect of production scale and possibility to influence other business entities		Small scale of market coverage provides direct personal link between a small business entity and a personified consumer and allows considering current and potential demand more correctly

In turn, there are many so called rating agencies which define investment appeal of national economies on a global scale. Among others, the leaders in this kind of study are Fitch Rating, Standard & Poor's and Moody's.

It is the ratings and predictions of these companies that potential global investors refer to, and economic performance and business development are largely dependent on the capital inflow of the latter. Thus, Fitch Ratings defines the following levels of credit capacity (tab. 3).

As it was reported on November 18, 2015, in the press-release of Fitch Rating, the agency upgraded long-term credit rating of Ukraine in foreign currency from RD to CCC [13].

It should also be noted that according to the World bank's study of general assessment of business performance from 2010 to 2015 Ukraine moved up from rank 147 to rank 96 among 189 countries in the world [14].

There currently exist a great number of scientific approaches to development and realization of strategic managerial decisions. Most often used in the modern study of strategic management are the following approaches: systematic, complex, integrated, marketing, functional, dynamic, reproductive, processing, normative, quantitative, administrative, behavioral, situational. Each of these approaches has methodical specifics of realization, orienting points and analytical tools.

Table 3

Fitch Rating of credit capacity

Credit rating	Description
AAA	The highest credit capacity. The lowest default risk expectations, assigned only in case of exceptionally strong capacity to meet financial commitments. Chances of negative impact on the part of predictable conditions are very low.
AA	Very high credit capacity. Very low default risk expectations indicate very strong capacity to meet financial commitments. Vulnerability to the impact on the part of predictable conditions is not significant.
A	High credit capacity. Low default risk expectations and strong capacity to meet financial commitments. Nevertheless, this capacity can be vulnerable to the impact of adverse business environment or adverse economic conditions to a greater extent than in higher-rated cases.
BBB	Adequate credit capacity. Higher vulnerability to default risk, especially in case of near term adverse changes on the part of business environment or economic conditions. However, business or financial flexibility makes it possible to meet financial commitments.
BB	Speculative rating. Higher vulnerability to default risk, especially in case of near term adverse changes on the part of business environment or economic conditions. However, business or financial flexibility makes it possible to meet financial commitments.
B	Very high speculative-grade rating. Significant default risk, although there is some limited strength reserve. Financial commitments are currently met, but the capacity to pay out on obligations is vulnerable in case of deterioration of business environment or economic conditions.
CCC	Substantial credit risk. Distinct possibility of default.
CC	Very high level of credit risk. Default in one form or another is possible.
C	Exceptionally high level of credit risk. Default is very near or unavoidable, or an emitent has suspended activities. The following factors are characteristic of the emitent: the emitent has entered a period of favorable economic conditions or a remedial period after failing on main financial commitments; the emitent has acquired a temporary permit on default on obligations or has made an agreement about nonpayment on obligations after failure to meet main financial commitments. Fitch, on other grounds, believes that the situation relevant to rating RD or D is near or unavoidable, also in terms of official announcement about the swap of distressed debt.

Source: information analyzed from [12]

However, application of these approaches by business operators of different forms and scales of activities is impractical due to complexity of these methods.

Thus, in the context of drastic changes of political and economic environment connected with globalization of economy and quick pace of technological innovation, for a business to make the strategy of its progressive development having defined a proper direction of the latter, on the base of state business support policy, is a decision-making process under conditions of high information asymmetry.

Conclusions. Strategic priority definition including positive global tendencies of economic upturn can be considered an additional advantage for strategy making in aggressive and changeable environment. On the basis of the above-stated the following conclusions can be made:

- strategy represents the line of development of a business entity with defining priorities in goal achievement and realization of certain management functions under changeable environment in order to improve quantity and quality characteristics of a business activity results;

- development strategy can be characterized by one or more parameters reflecting the process of goal pursuit. For quicker and more efficient realization of all set goals and stated missions under conditions of globalization, it is essential to plan business activities with regard to the concept and perception of interaction of micro-, macro-, meso- and mega-levels of economic performance;

- for assessment of efficiency of choice and realization of development strategy we suggest using the indicator of strategic development of an enterprise (*SDE*) in view of the impact of market conditions on enterprise value under globalization of economic processes.

- strategy making and realization are carried out by means of using corresponding techniques which are immanent to general goals and missions of a business entity;

- the scale of business activities and strategy making horizons allow to link tactics and strategies of a business entity to achieve the maximum effect from strategic management realization;

- using of the system of strategic development indicators given in this article, and analyses methods, on different levels of economic system operation and interaction with a business entity, and also definition of stability and investment appeal under globalization, can contribute to positive changes in political and economic system of countries with emerging economy, in particular, Ukraine;

- definition of strategic priorities of a business development under globalization is the main point of the maximum horizon of strategic planning and a matter of great concern of business entities;

- decrease of information asymmetry between state authorities and global market operators, on the one hand, and mostly small and medium-sized businesses, on the other hand, will allow raising responsibility of the former and increasing growth rate of the latter. This, in turn, will contribute to stabilization of the global social and economic system.

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Пайонк К., Ляшенко В., Квілінський О. Функціонування суб'єкта підприємницької діяльності в умовах глобалізації

У статті досліджено проблеми, які пов'язані з функціонуванням суб'єкта підприємницької діяльності в умовах глобалізації економічних процесів. Проаналізовано на прикладі України взаємодію економічних систем з точки зору суб'єкта підприємництва. Запропоновано методи оцінки та визначення орієнтирів для вибору стратегічних напрямків розвитку підприємства.

Ключові слова: стратегія, суб'єкт господарювання, глобалізація.

Пайонк К., Ляшенко В., Квилинский А. Функционирование субъекта предпринимательской деятельности в условиях глобализации

В статье исследованы проблемы, связанные с функционированием субъекта предпринимательской деятельности в условиях глобализации экономических процессов. Проанализировано на примере Украины взаимодействие экономических систем с точки зрения субъекта предпринимательства. Предложены методы оценки и определения ориентиров для выбора стратегических направлений развития предприятия.

Ключевые слова: стратегия, субъект хозяйствования, глобализация.

Payonk K., Lyashenko V., Kvilinskyi O. Operation of a Business Entity in the Context of Globalization

The article looks into the problems connected with the operation of a business entity in the context of globalization of economic processes. Interaction of economic systems has been analyzed from the perspective of a business entity on the example of Ukraine. There have been suggested methods of assessment and benchmark definition for choosing strategic directions of a business development.

Keywords: strategy, business entity, globalization.

Received by the editors: 01.12.2015
and final form 28.12.2015

UDC 332.8:364.22:621.31

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COMBATING ENERGY POVERTY IN THE SOCIAL HOUSING STOCK

1. Introduction

A full-scale development strategy of the European Union, known as "Europe 2020", has become a contemporary framework of the Polish economic policy, including the energy and housing policy. The bases for this policy are: 1) investments in education, scientific research and innovations, 2) balanced development conducted in accordance with the low-carbon economy, as well as 3) social integration (the so-called social inclusion), with a particular emphasis put on reducing poverty and creating new workplaces.

The social housing stock is an important instrument in the state's fight against poverty and social exclusion. The investments realised in the social housing construction support the development and attractiveness of certain urban areas or entire cities. Social housing construction serves as a stabiliser of tensions which appear on local housing markets and it depreciates (softens) the course of housing cycles [Cf. Lis 2008, 2012]. Improving living standards is, at the same time, an important element of achieving the aims of the energy policy in terms of increasing energy efficiency and reducing the level of the emissivity of the economy. The potential of housing construction as regards improving energy efficiency has been estimated to be 30 $MtCO_2$ until 2030, which makes up 13% of the total potential of reducing the emission of greenhouse gases in the economy of Poland [McKinsey 2010].

In the face of the growing prices of energy, heat and gas in relation to the households' income and low energy efficiency of residential (and public) buildings, there occurs an issue of energy poverty. A fundamental definition of energy poverty indicates that it is a phenomenon which consists in experiencing hardships with maintaining adequate heating in residential buildings [Li et al. 2014]. With the course of time, this phenomenon began to be considered from a more comprehensive viewpoint, encompassing the necessity to provide households with an access to electric and gas energy used for realising essential needs [IEA 2010] as well as to conduct proper modernisation of dwellings, purchase heating systems and devices [Cf. Stępniak, Tomaszewska 2014, pp. 6-7]. It shall be highlighted that energy poverty in well-developed countries is considered from the viewpoint of economic (and not physical) access to energy. The energy poverty-stricken households are considered to be those in which the amount of expenditures on energy and fuel exceed 10% of income [Boardman 2012].

The authors have put forward a thesis that the social housing stock and social housing construction could serve as a crucial instrument in the state's fight against energy poverty, simultaneously realising the essential aims of the social housing policy and being in harmony with the EU law, especially in terms of providing services in general economic interest.

The main aim of this work is to assess the possibilities (conditions) for including social housing construction in the fight against energy poverty among low-income households or other sensitive groups. In order to fulfil this aim, the following research tasks have been assumed. To begin with, the first part of the work identifies the right to housing as the basis for conducting an active housing policy. Next, the authors identify the aims, instruments and models of the social housing policy. In this context, the main housing problems in the European Union member states are identified, with particular attention paid to energy poverty. Finally, the authors suggest a range of instruments which can be used for combating energy poverty within the social housing policy.

The authors use the statistical data of the Eurostat and the International Energy Agency. Furthermore, specialist studies concerning the issues of social housing construction and energy poverty are used in this work. However, the main inspiration for writing this work are two opinions of the European Economic and Social Committee: 1) "In the case of the issues with defining social housing as a service of general economic interest" and "**For coordinated European measures to prevent and combat energy poverty**" [EKES 2013a, 2013b].

2. The right to housing as the basis for conducting an active housing policy

The right to housing, being the basis for conducting the housing policy, has been recognised in the Universal Declaration of Human Rights, which says that "everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services". Furthermore, the right to housing may also be found in the European Social Charter: "With a view to ensuring the effective exercise of the right to housing, the Parties undertake to take measures designed: to promote access to housing of an adequate standard; to prevent and reduce homelessness with a view to its gradual elimination; to make the price of housing accessible to those without adequate re-

sources". The Charter of Fundamental Rights of the European Union also claims as follows: "In order to combat social exclusion and poverty, the Union recognises and respects the right to social and housing assistance so as to ensure a decent existence for all those who lack sufficient resources, in accordance with the rules laid down by Community law and national laws and practices". Finally, the right to housing has been laid down in the constitution of a number of member states or is subject to special legal acts which aim at its effective implementation.

The right to housing is fulfilled in the majority of member states through the services provided in general economic interest. According to Article 36 of the Charter of Fundamental Rights, which says that "the Union recognises and respects access to services of general economic interest as provided for in national laws and practices, in accordance with the Treaty establishing the European Community, in order to promote the social and territorial cohesion of the Union". Under Article 106 (2) of the Treaty on the Functioning of the European Union, and under the assumption that common access to housing is considered as a service provided in general economic interest, undertakings obliged to manage the services provided in general economic interest are subject to the norms contained in the Treaties, including the rules on competition and the principles concerning the ban on and control of the state's support, within the limits in which their application does not constitute a legal or actual obstacle to the performance of particular tasks given to them by the national, regional or local authorities.

The decision of the European Commission concerning the services provided in general economic interest of 20 December 2011 reduces the access to subsidised social dwellings for the disadvantaged and for less privileged social groups which are unable to find housing at market conditions due to their solvency constraints. In accordance with Protocol no. 26 of the Treaty of Lisbon, the main responsibility for provision, finance and organisation of services of general economic interest shall be vested in the member states and their national, regional and local authorities which have a vast scope of discretional capacities in these areas and a democratic freedom of choice [EKES 2013, p. 53].

In sum, the right to housing encompasses both the issues of the availability, capacity to purchase or rent dwellings and maintain them, as well as the standard of the housing stock. Energy poverty is closely connected with the right to housing in a sense that it determines the standard of the stock as well as the households' capacity to maintain the stock. An active role of the state in the European Union member states, supporting the right to housing, has become greatly limited and controlled more closely by the European Commission. On the other hand, the state's instruments aiming at reducing energy poverty through the social housing stock or social housing construction are not subject to such restrictions from the European Commission.

3. Social housing policy goals

The housing policy is one of the sector policies conducted both by the central authorities as well as the local authorities, engaging public entities, social organisations, private entities, in order to achieve the main, long-term goals which are: a) creating favourable conditions for purchasing and renting the housing stock by all citizens as well as creating the possibilities to maintain this stock, b) ensuring the availability of housing and c) guaranteeing an adequate housing standard [Lis 2008]. The detailed specification of the main housing policy goals should refer to the citizens' housing needs and the demand for housing reported at a given time and place, and the manner of realising the "right to housing (reside)" will influence the social model functioning in a given country [Lis 2005]. The principle of determining a mutual system of rights and obligations of households, enterprises and the state in terms of ensuring fundamental housing conditions should be based on the "right to reside". This right does not, however, give citizens consent to take a demanding attitude towards the state in order to fulfil their housing needs, not supported by their individual effort to fulfil these needs. The right to reside also encompasses such components as: a right to choose the form of housing ownership, a right to reside in standards which are not beneath human dignity, a right to change the place of residence [Andrzejewski 1987]. The interpretation and realisation of the right to reside is becoming one of the main factors delineating the shape (model) of the housing policy.

The realisation of the above goals of the state's policy requires special instruments used with reference to persons with a low economic status or with reference to specific, sensitive social groups such as: the disabled, the unemployed who have not been working for a long time, the elderly who are left to themselves, families with many children, single parents, emigrants and refugees, ethnic minorities, persons facing eviction, persons who live in dangerous areas, as well as young married couples or students. It shall be highlighted, however, that the criteria which enable identification of these sensitive groups are quite diverse in particular European Union member states; moreover, they tend to change with time. They include above all the criterion of income, social risk, a number of persons in a household, age, marital status, health condition, class and race. Specific instruments applied with respect to persons with a low economic status or sensitive groups have contributed to the fact that the so-called **social housing policy** has been specified. Besides determining the manners of allocating and accessing the social housing stock (conditions for entering and leaving – even obligatorily – the social housing stock), among the tasks of the social housing policy should be assessing the capacity of households to rent (or in certain cases to purchase) housing in the social housing stock and to maintain this housing, as well as determining the scope of legal protection for the tenants and owners of the stock [Lis 2008, 2012].

Thus, the social housing policy makes up for an important area in the fight against energy poverty due to its focus on low-income households and sensitive groups.

4. Social housing policy models

Taking into consideration the goals and instruments applied, two major models of the social housing policy may be indicated – a universal model and a selective model. The latter may be further divided into two variants: general and residual [See more in Lis 2008, 2013; Ghekiere 2009].

The prevailing aspects of **the universal model** are the ideas of solidary payment and reception of benefits by all citizens, while there exists differentiation concerning the degree of public strains and benefits depending on the households' financial possibilities. The capital-redistribution function of the financial system is a crucial element of the universal policy. In this approach the housing policy uses the instruments of regulation and support in relation to the entire housing market, creating the so-called vast area of influence [Bengtsson 2001, 2004]. In the universal model the state aims at providing housing to every citizen, regardless of their income. As a result, additional demand for social housing is created, which supplements the housing market. Significant changes in the conditions of functioning of the housing market occur in this model, including dwelling prices and rent rates. The replacement value and not the market value becomes a priority investment criterion. On the other hand, the security of renting dwellings increases, which cannot be guaranteed by the private sector. The universal model has been predominant in Denmark and the Netherlands, and it has occurred also in Sweden [EKES 2013a, pp. 54-56] [1].

In Denmark, the universal conception is deeply rooted in the model of a welfare state. The notion of disadvantaged, weak and excluded groups or persons is not limited by a given level of income. The aim is to ensure affordable and available dwellings to persons who need them. A traditional real estate market is enriched thanks to lifting legal social obligations and ensuring social equality and diversification in terms of ethnic origin, sex, income, age, disability or mental and physical needs. The pricing policy is regulated and based on actual costs, which eliminates the possibility of excessive compensation [EKES 2013a, p. 56].

The European Commission is against the functioning of the universal model in the housing sphere due to the lack of concentration on a specific social demand. According to the European Commission, it does not reflect the EU definition of a service provided in general economic interest in connection with housing. The objects at issue are the principles of financing private enterprises operating within social housing construction. The basis for the objection against the universal model is the European Commission Decision of 2005 on the application of Article 86(2) of the EC Treaty[2] to State aid in the form of public service compensation granted to certain undertakings entrusted with the operation of services of general economic interest[3]. A necessity to control the compensation granted to private entrepreneurs was introduced with reference to social housing. Furthermore, the member states were obliged to prepare detailed reports within a three-year-time period which would become the basis for the assessment by the European Commission[4]. The Directorate-General for Competition launched explanatory procedures concerning the conformity of the state's support given in the Netherlands and Sweden with the laws and principles of the uniform market. The case of the Netherlands concerned the definition of social construction, which – according to the EU institution – encompassed an excessive number of persons, some of whom did not belong to sensi-

[1] Sweden opted out from providing a clear specification of the service provided in general economic interest with respect to social housing.

[2] The Treaty of Amsterdam, which was signed on 2 October 1997 and came into force on 1 May 1999, introduced changes and new numeration of the articles contained in the Treaty on the European Community and the Treaty on the European Union. It also contains attached, consolidated versions of the Treaty on the European Union and the Treaty establishing the European Community. In accordance with Article 86 (2), "*Undertakings entrusted with the operation of services of general economic interest or having the character of a revenue-producing monopoly shall be subject to the rules contained in this Treaty, in particular to the rules on competition, insofar as the application of such rules does not obstruct the performance, in law or in fact, of the particular tasks assigned to them. The development of trade must not be affected to such an extent as would be contrary to the interests of the Community*."

[3] Under Article 5 of **Commission Decision of 28 November 2005 on the application of Article 86(2) of the EC Treaty to State aid in the form of public service compensation granted to certain undertakings entrusted with the operation of services of general economic interest** (notified under document number C(2005) 2673) "*The amount of compensation shall not exceed what is necessary to cover the costs incurred in discharging the public service obligations, taking into account the relevant receipts and a reasonable profit on any own capital necessary for discharging those obligations. The compensation must be actually used for the operation of the service of general economic interest concerned, without prejudice to the undertaking's ability to enjoy a reasonable profit*."

[4] The Member States conduct regular inspections or commission such inspections in the sector of social housing in order to ensure that a given undertaking does not take compensation exceeding the amount specified under Article 5. Each compensation surplus up to 20% of the annual compensation may be transferred to the following accounting period, on condition that a given undertaking runs its activities solely within the scope of services provided in general economic interest. The results of the assessment of the influence are submitted to the European Parliament, European Committee of the Regions, European Economic and Social Committee and the member. Source: **Commission Decision of 28 November 2005 on the application of Article 86(2) of the EC Treaty**.

tive groups. It was postulated that the Dutch social construction organisations should sell the housing stock in order to suit EU regulations. The case of Sweden regarded the conformity with the law of the support given by the local authorities to the entities which provided services within the scope of social housing in which the authorities acted as shareholders [Cecodhas 2007].

In **the general variant of the selective model** the beneficiaries of the state's support in the housing sphere are the persons who have found themselves in a difficult economic situation or those who have been excluded (alike the residual model discussed further in this work), as well as the persons with a meagre income and difficult access to adequate housing due to their uncertain income. The access to housing is most frequently conditioned by the level of income and the composition of the household. Rents are regulated and remain affordable. This conception has in most cases a limited influence on the general level of supply of dwellings and on their prices, and it does not cause any conflicts with the private real estate market, since the profits remain very limited. This conception encompasses wider categories of people and complies with the community requirements with respect to concentrating on social demand. It is applied in the following countries: Germany, Austria, Belgium, Spain (access to ownership), France, Finland, Italy, Luxemburg, Poland, the Czech Republic and Slovenia [Cf. EESK 2013, pp. 54-56].

In **the residual variant of the selective model** the social housing subsidised by the public authorities is reserved to the persons in a difficult economic situation or those who have been excluded, and clearly defined as such. In the case of such housing, there are very rigorous principles of allocation used. The rent is almost entirely paid through the system of social assistance. This conception does not create any competition to the private real estate sector and is fully compatible with the EU definition of a service provided in general economic interest with respect to social housing, formulated in the European Commission Decision of 20 December 2011 renewing the exemption from the prior notification obligation to report the compensation for the costs of public services as regards making social housing available to the "disadvantaged or those who are in a worse social situation, without adequate means, in order to obtain housing on market principles". This category includes: Bulgaria, Cyprus, Estonia, Hungary, Ireland, Lithuania, Latvia, Malta, Portugal, Romania, the United Kingdom, Slovenia and – partly – Spain (social rental sector) [Cf. EKES 2013, pp. 54-56].

In brief, there are two models of social housing policy in the European Union member states – the universal model and the selective model. The activities of the European Commission aim at gradual elimination of the universal model in favour of the selective model. As a result, the fight against energy poverty in the social housing stock will concentrate either on sensitive groups or on households with low income or no income at all.

5. The issue of Energy poverty in the background of other housing problems

All member states except for Greece have their own social housing stock, yet the size of the stock varies to a large extent both among the countries (e.g. the countries of the "old" and "new" European Union, i.e. EU-15 and EU-13), and inside these countries (i.e. urban versus rural areas, city centres versus outskirts). According to the Eurostat data at the end of 2013, an average of 11% of the Europeans lived in the housing stock for rent, with non-market rent. In Poland, this number amounted to 12%, which is slightly higher than the average in the Community.

The main aim in the area of housing for the majority of public authorities of the EU member states is to provide the inhabitants with common access to decent (with a minimum standard), affordable housing and the activities for the rationalisation of the costs housing maintenance. Despite varied activities of the member states, 5.2% of Europeans (according to the Eurostat data at the end of 2013) faced a threat of serious housing deprivation, i.e. they lived in overpopulated dwellings[1] with at least one of the following problems: a lack of toilet or bathroom, leaky roof or lack of adequate lighting. According to the Eurostat data, 17.4% of Europeans lived in overpopulated dwellings, whereas 11% of households spent at least 40% of their equivalent disposable income on housing needs. **Housing deprivation, including the issue of overpopulated dwellings inhabited by persons facing poverty, constitutes the main challenge for the social housing policy**. High housing deprivation, including a high overpopulation ratio, reduces young people's chances to get suitable education, which consequently may be a limitation in finding proper employment.

Participation of housing expenditures[2] in the households' disposable income amounted to an average of 22% in the European Union member states. On the other hand, the proportion of persons whose housing expenditures exceeded 40% of the equivalent disposable income averaged 11%. In Poland the results in this area ran at the level of the EU average (22.7% and 10.3%

[1] The overpopulation ratio means a failure to meet whichever of the following criteria: one room per household, one room per every adult, one room per two children of the same sex aged 12-17, one room per every child between 12 and 17 – different sexes, one room per a couple of children aged below 12 years old.

[2] Housing expenditures refer to monthly costs of housing maintenance. They include payments for utility bills, including the cost of water and sewage, electricity, gas and heating, mortgage interest, insurance, repair and renovation fund, fees for the real estate administration, rent – in the case of lessees, real estate taxes.

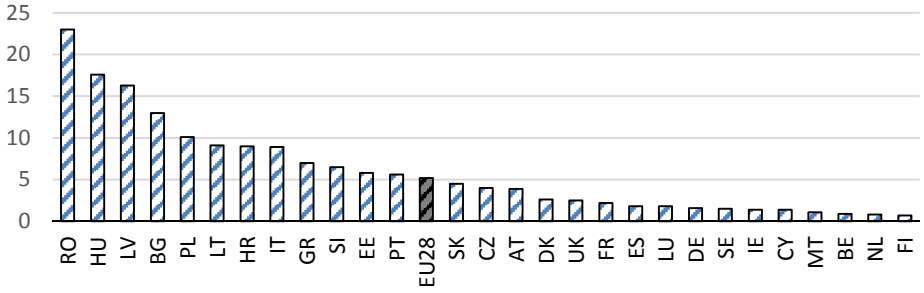

Fig. 1. Serious housing deprivation in European Union member states in 2013

Source: based on the European research on living conditions, EU-SILC, Eurostat [ilc_mdho06a].

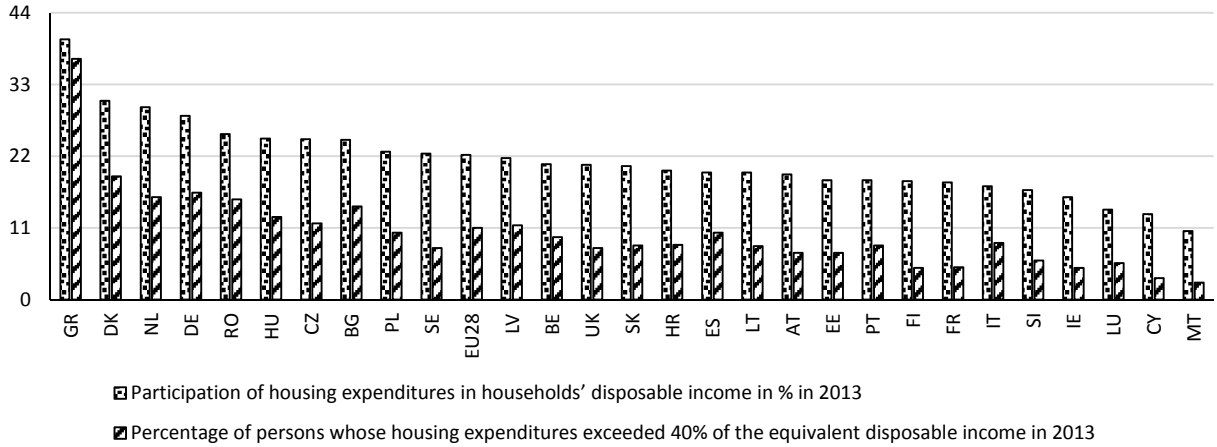

Fig. 2. Housing expenditures in the European Union member states in 2013

Source: based on the European research on living conditions, EU-SILC, Eurostat, EU-SILC, Eurostat, [ilc_mded01, ilc_lvho07a].

respectively). It shall be mentioned at this point that one-third of the inhabitants of Greece, almost one-fifth of the Dutch citizens and one-sixth of the inhabitants of Germany, Romania and the Netherlands spent over 40% of their equivalent disposable income.In the light of the above housing problems, the EU member states may be divided into a few groups characterised by the scale of occurrence of serious housing deprivations and high costs of housing maintenance (Cf. fig. 3). Two housing issues occur simultaneously in such countries as: Romania, Hungary, Latvia, Poland and Greece, i.e. in the countries with relatively (compared to the EU-28 average) lower economic development, especially in the countries which have undergone the political and economic transformation. Excessive housing expenditures, with a relatively good condition of the housing stock appear in particular in Denmark, Germany and the Netherlands, thus in the countries with a high level of economic development.

In the light of the above presented housing problems, there occurs an **additional phenomenon of energy poverty**. Among the main, direct factors shaping this phenomenon, there are: the amount of energy consumption by households and the types of energy used, the level of energy efficiency of households (in relation to energy efficiency of occupied buildings, energy consumption of the appliances used as well as consumers' behaviour), the level of the household's income and the level of energy prices. The factors which influence the level of energy poverty indirectly include among all: 1) the size and structure of a household, which shape specific energy needs, 2) the legal title to the real estate, conditioning the scope of decisions taken in order to improve energy efficiency and 3) the type of the heating system and possibilities to substitute the sources of energy in order to lower the costs of fuel.

Nowadays, both in social sciences and in economic practice, there is no complex and universal index allowing for monitoring the level of energy poverty. The most frequently used evaluation, due to the lack of other measures, is an answer to the question concerning the occurrence of hardships with maintaining an adequate level of heating in the place of residence, asked to households under the EU-SILC research survey conducted by the Eurostat. It seems, however, that for the purpose of making international comparisons, these

estimates should be complemented at least with the data reflecting the differences in energy-related strains (both electricity and heating) on the households' budgets. Consequently, energy poverty is reflected in the following part of this work as an index which contains information concerning: 1) hardships with maintaining adequate temperature in a dwelling, 2) the occurrence of delays in housing payments, 3) the participation of the costs of housing maintenance in households' budgets [Cf. Healy 2004, Bouzarovski 2011].

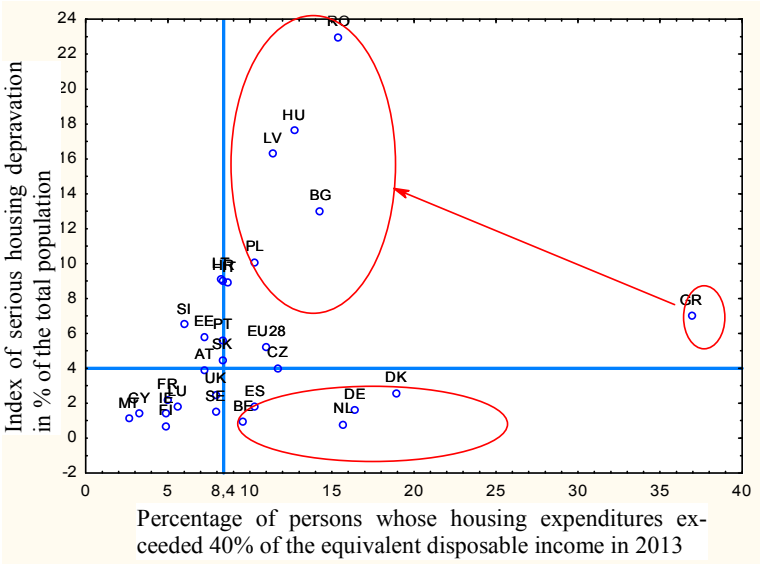

Fig. 3. Relation between excessive expenditures and serious housing deprivation in the EU member states in 2013

Explanations: two bold lines mean a median of assumed indexes for the EU-28 member states.
Source: based on the European research on living conditions, EU-SILC, Eurostat.

Based on the analysis conducted by the authors, it may be concluded that among the EU member states that highest level of energy poverty is found in the economies of Greece and Bulgaria (Cf. fig. 4). The values of all the features under analysis place these economies in the forefront of the EU. The problem with maintaining a comfortable temperature in dwellings in Bulgaria and Greece was present in 45% and 30% of the population of these countries respectively. Interestingly, the majority of countries with energy poverty above the average are the countries of southern Europe, situated on the Balkans and in the Mediterranean Sea basin as well as the countries of central and eastern Europe. This phenomenon may be explained by the differences in the degree of energy efficiency of residential buildings (including adequate thermal insulation), the level of wealth and ecological awareness of the society (Cf. fig. 5). This interrelation makes us maintain the conclusion that in spite of aiming the energy policy at the growth in the efficiency of energy consumption, alongside a growing level of prosperity, there occurs a quantitative increase in the consumption of energy by households.

For the majority of the EU member states, a prevailing carrier of energy in households in 2013 was natural gas, which covered 37.4% of the entire consumption of energy in households in the EU-28 group.

The above-presented set of conditions leads to a conclusion that although the households which are poor in economic categories are also stricken by energy poverty, the two categories of poverty may not necessarily appear simultaneously. In fact, there might occur a situation in which a household whose income exceeds the poverty income criterion is located in a building with low energy efficiency or uses devices with high energy consumption. As a result, the level of energy-related expenditures connected with housing maintenance increases above the average values. Another example may be a household which earns an average income, residing in an energy efficient building in which consumers behaviours lead to improper (excessive) consumption of energy.

The identification of the main reasons for the occurrence of energy poverty is essential to create solutions which would diminish the scale and scope of the phenomenon. In the case of households which are poor in the categories of income and energy, reducing economic poverty is a necessary condition in order to decrease energy poverty. If, however, energy poverty strikes households with an average income, yet belonging to sensitive groups, the role, character, scope and efficiency of the state's intervention changes.

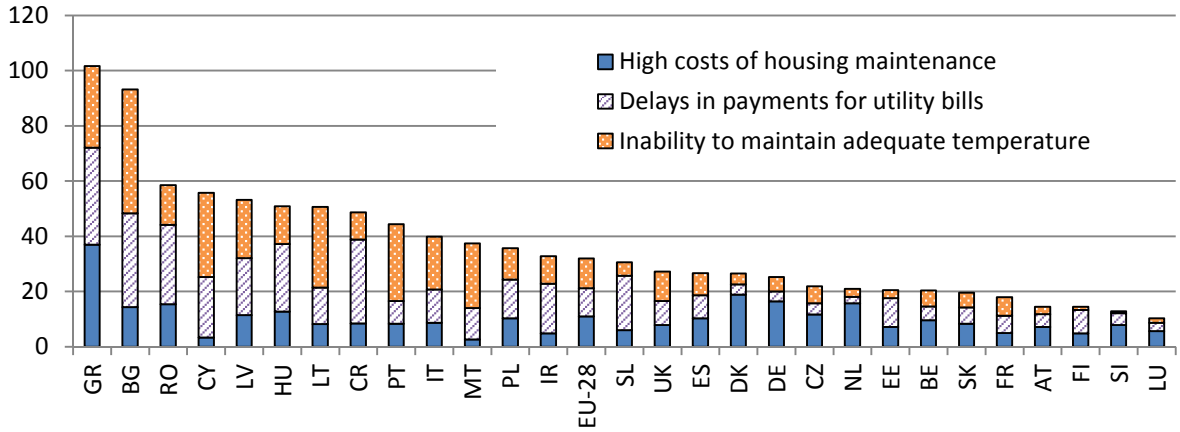

Fig. 4. Level of energy poverty in the EU member states in 2013

Source: based on the European research on living conditions, EU-SILC, Eurostat, [ilc_lvho07a, ilc_mdes07, ilc_mdes01, ilc_mdho01].

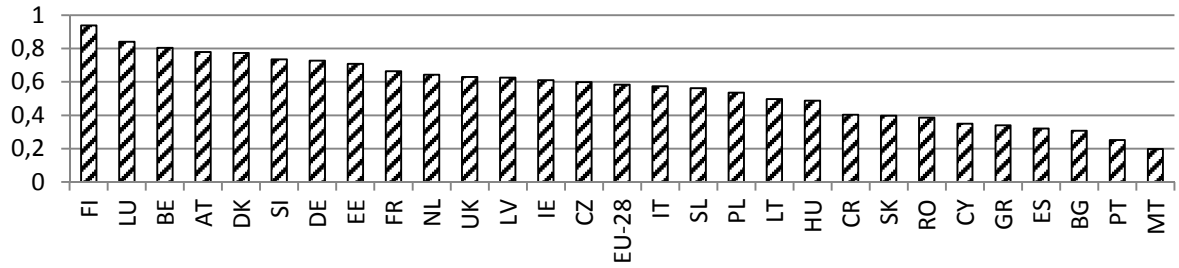

Fig. 5. Final energy consumption in households in the EU member states in 2013 per capita

Source: based on the Eurostat data, [t2020_rk200].

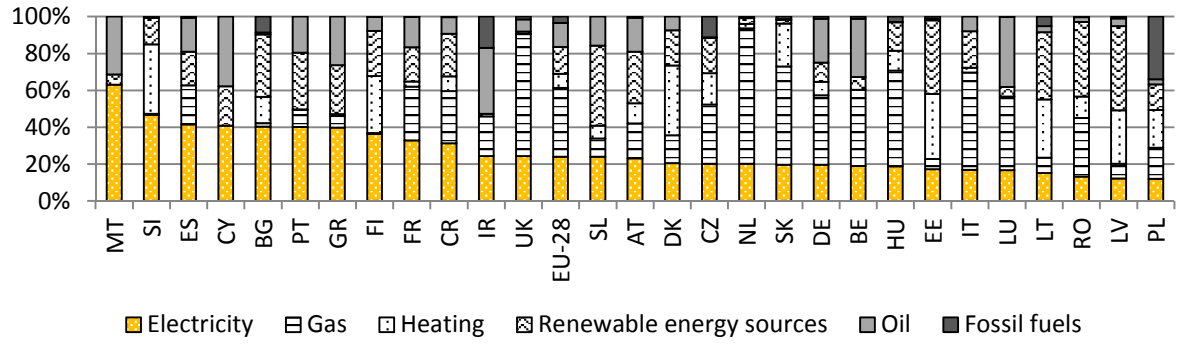

Fig. 6. Structure of the sources of energy used in households in EU member states

Source: based on the Eurostat data, [t2020_rk210].

6. Suggestions for combating energy poverty within the social housing policy

Taking into consideration the factors which shape energy poverty, three directions of actions aiming at diminishing the scope of this phenomenon may be determined [Cf. Węglarz, Kubalski, Owczarek 2014]. The first group of solutions encompasses **technical** actions, directed primarily at modernising and improving energy efficiency. These solutions include among all thermomodernisation of residential buildings, modernisation of heating installations and systems, replacement of energy consuming devices. The second group of solutions is composed of **economic** instruments, among which there are instruments of direct support of income, instruments supporting investments in energy efficient solutions and instruments of securing claims. The third group is made up of the solutions which aim **at educating and shaping consumer models**, among all improving the knowledge in the area of an efficient use of energy or abilities to choose, modernisation and attendance of energy efficient devices. An important element in this group of solutions is monitoring the level of energy poverty.

Taking into account the shape of the social housing stock and social housing construction, it may be highlighted that the instruments applied will be more selective than universal in their character. They will be directed at low-income households or sensitive groups. It serves more as an advantage of the solutions rather than a drawback. It has been postulated that in the case of the instruments directed at low-income or no-income households, the state's activity should be channelled to institutional support: gminas, non-profit organisations or investors participating in social undertakings. An important group of instruments will include the activities which are more technical in their character. As regards the group of sensitive households, with an average income, the state's instruments may be targeted directly at these households, yet based on the principle of their participation (also financial) in improving energy efficiency and reducing energy poverty. An important role in this target group may be played by the economic instruments.

7. Summary

The social housing stock and social housing construction may constitute one of the areas for combating energy poverty in the European Union member states. Including the activities within this scope into the housing sphere requires taking into consideration the conditions for conducting the social housing policy. One has to bear in mind, however, that the housing problems in the countries of the Community have a twofold character: first, there is serious housing deprivation, and second, there are excessive costs of housing maintenance. These issues concern to a large extent the countries which have undergone economic and political transformations, and are becoming more and more troublesome for the countries of the so-called western Europe, especially in the area of housing expenditures. Supporting the housing sphere with structural funds from the European Union in the years 2014 – 2020 thus seems fully justified, especially with respect to thermomodernisation and promoting renewable sources of energy and integrated activities concerning the fight against energy poverty.

The instruments of the state's policy directed at combating energy poverty within the social housing stock and housing construction will be targeted at households with low income or no income at all as well as sensitive groups with an average income. As regards the instruments directed at the former group of households, the priority is given to technical activities. In the case of the latter group, of key importance here are the economic instruments whose role is to support the realisation of energy investments together with financial resources coming from this group of households.

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Лис П., Мазуркевич І. Посилення енергетичної складової в побутовій сфері

Автори цієї публікації вказують, що в другому десятилітті XXI століття інститути ЄС націлені на енергетичну політику в побуті і її вплив на загальний клімат. Показана виправданість громадської підтримки інвестицій в економію енергії в побуті як спроба нейтралізувати зміни клімату, скоротити бідність серед сімей з низьким рівнем доходу і, щоб просувати місцеві робочі місця і економічний розвиток в цій області. Єдина політика Євросоюзу активно сприяє зміцненню його динаміки і гарантує ефект важеля, який у свою чергу призводитиме до використання інших, додаткових джерел фінансування. Відповідно до директив Єврокомісії, житлова сфера була кваліфікована, як така що підлягає підтримці від структурних фондів в новій фінансовій перспективі до 2020 р., особливо в термінах термомодернізації і просування поновлюваних джерел енергії. Але він доки не об'єднав дії, що націлюють розвиток міст на боротьбу за економію енергоресурсів, забезпечення доступу до житла маргіналізованим суспільствам і пропозицію соціальних послуг високої якості.

Ключові слова: соціальне житлове будівництво, бідність, енергія, клімат.

Лис П., Мазуркевич И. Усиление энергетической составляющей в бытовой сфере

Авторы этой публикации указывают, что во втором десятилетии XXI столетия институты ЕС нацелены на энергетическую политику в быту и ее влияние на общий климат. Показана оправданность общественной поддержки инвестиций в экономию энергии в быту как попытка нейтрализовать изменения климата, сократить бедность среди семей с низким уровнем дохода и, чтобы продвигать местные рабочие места и экономическое развитие в данной области. Единая политика Евросоюза активно содействует укреплению его динамики и гарантирует эффект рычага, который будет в свою очередь приводить к использованию других, дополнительных источников финансирования. В соответствии с директивами Еврокомиссии, жилищная сфера была квалифицирована, как подлежащая поддержке от структурных фондов в новой финансовой перспективе до 2020 г., особенно в терминах термомодернизации и продвижения возобновляемых источников энергии. Но он пока не объединил действия, нацеливающие развитие городов на борьбу за экономию энергоресурсов, обеспечение доступа к жилью маргинализированным обществам и предложение социальных услуг высокого качества.

Ключевые слова: социальное жилищное строительство, бедность, энергия, климат.

Lis P., Mazurkiewicz J. Combating Energy Poverty in the Social Housing Stock

The authors of this publication indicate that in the second decade of the 21st century European Union institutions have been aiming at encompassing social housing construction into a common climate and energy policy. It has been shown that the justification of public support for energy investments in the social housing stock is an attempt to counteract climate changes, reduce energy poverty among low-income households as well as to promote local workplaces and economic development in a given area. The cohesion policy of the European Union may actively contribute to strengthening its dynamics and ensure a leverage effect which in turn will lead to the use of other, additional sources of finance. In accordance with the guidelines of the European Commission, the housing stock has been qualified to be subject to support from structural funds in the new financial perspective until 2020, especially in terms of thermomodernisation and promotion of renewable sources of energy, integrated actions aiming at developing urban areas and combating exclusion by providing access to dwellings to marginalised communities and offering high quality, affordable social services.

Keywords: social housing construction, energy poverty.

Received by the editors: 07.04.2015
and final form 28.12.2015

UDC 330.341+331.2:658.8(477.62)

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THE FACTORS OF ECONOMIC MECHANISM FOR RECOVERY THE DOMESTIC MARKET OF DONBAS

Problem Statement. The discussions about current state and future of Donbas on the backdrop of the military confrontation in the Ukrainian society expressed different and sometimes contradictory, opinions. Along with understanding the need for a subsequent resumption of the effective functioning of the Donbas sound and appeals for a complete economic blockade of Ukraine uncontrolled part of it. In this opinion often manifested the military-political aspects of the problem, while the economic impact of such a move seriously not taken into account. It does not take into account the role previously played, and again, after the resolution of the conflict, will play Donbas, which earlier formed 25% of the export potential of the country.

Against the background of the controversy about the benefits and problems associated with the beginning of 2016 a free trade regime with the European Union (EU), out of sight remain questions about the status of the domestic market of Ukraine, in particular, its development with the involvement of European investments. And above all – investments in enterprises of Donbas, which, after the resolution of the military-political crisis, on the background of mass unemployment and an ending of the traditional investment from the Russian Federation, will be the most attractive targets for cheap investments. Obviously, it will need to run an effective economic mechanism of recovery of the domestic market of Donbas, which factors are discussed in this article.

Analysis of Researches and Publications. Sources of different relationships to the Donbas, including the requirement of its economic blockade, most fully revealed in his latest works V.P. Gorbulin [1]. Unfortunately, the position of the blockade maintains a certain part of the Ukrainian political class, in particular, the leadership of the Lugansk regional military and civil administration [2]. In [1] carefully analyzed the economic losses of Ukrainian from the blockade of Donbas. However, the lack of a unified state policy in this matter puts the companies in occupied area of Donbas, which operate in the legislative field of Ukraine, in difficult conditions. So, of the 25 largest enterprises in the Luhansk region 17 are located in the occupied territory, which creates difficulties with the organization of production and sales of products, transfer taxes. Despite this, the contributions of these enterprises to the budget of Ukraine at the end of 2015, only in the Luhansk region, will be about 1 billion dollars US. And the loss of these enterprises in the case of the blockade would lead to a loss of consumer market of the region in a volume of about 20 billion dollars US per annum [2].

In the current situation of Donbas is a clear the need to shape the future economic mechanism of recovery its domestic market on the basis of the country's overall development strategy, some provisions of which are being developed by A. Galchinskiy and V. Geets [3], Y. Zhalilo [4], E. Labinskaya [5]. They note that the strategic goals of the country's economy cannot be achieved without serious foreign investment, the sources of which will expand as Ukraine will move into EU structures. Determined that the priority areas to attract and support strategic investors may be those in which Ukraine has the necessary resource potential and forms a significant market need in the relevant product. It is noted that the highest investment attractiveness has export industry [6], the biggest sectors of which are the most developed precisely in Donbas. At the same time are considered the risks to invest in domestic enterprises. Determined that investors in most cases dismissed what would take on all the risks [7]. It requires the study of the economic factors, management that could ensure effective investment in enterprise of Donbas in order to restore its domestic market.

The objective of the article – the consideration the factors of economic mechanism for recovery of the internal market of Donbas.

Presentation of the Main Material. The starting point of the assessment of the internal market of Donbas is the comparison of its performance for the European Union, Ukraine and the Donbas as part of it. Consider such factors as:

gross domestic product (GDP) per capita, thousand dollars;

the share of wages in production costs – ShW, %;

domestic market share in total volume of the sales – ShDM, %;

the share of small business in GDP of the country and the region – ShSB, %;

the tax burden on labor.

If the gross domestic product (GDP) per capita in the most EU countries ranges from 14 to 30 thousand dollars, in Ukraine this figure with the current rate of the national currency in all forms of the definition will be in the range of 2-3 thousand dollars. In Donbas is expected much lower value of this indicator because of the huge number of unemployed.

The share of wages in the cost structure of production in Ukraine is 6-10 percent, whereas in many European countries – at least 40, and at the same time wage level in Ukraine is also much lower than in the EU [8]. In the structure of sales in Ukraine only 20% of domestic market share, while in the world practice, the ratio is the opposite meaning [9], in Poland, for example, the internal market covers about 60% of sales [10]. The share of the population employed in small and medium business in Ukraine in general up to 30% (including the informal sector), the same level of performance to be expected in the Donbas, as during the occupation of this kind of employment remained the only option for the population is there. In Europe, small and medium-sized enterprises employing more than 50%, in the US – up to 90% of the population [11]. In Poland, for example, small and medium enterprises produced 48,4% of GDP [10].

At relatively low wages in Ukraine total tax burden before 2016 amounted to 69% of payroll. It is the largest tax burden on wages in Europe, where in most countries it is between 35 and 50% [12]. However, by reducing the rate of the single social contribution in accordance with the tax legislation in 2016 should expect a significant reduction in the tax burden on wages in Ukraine.

Let the tax burden beyond further consideration, because of the legislative nature of its formation and, most likely, unchanged for a certain period, and remain other four considered indicators in a comparable form of the diagram in Fig. 1.

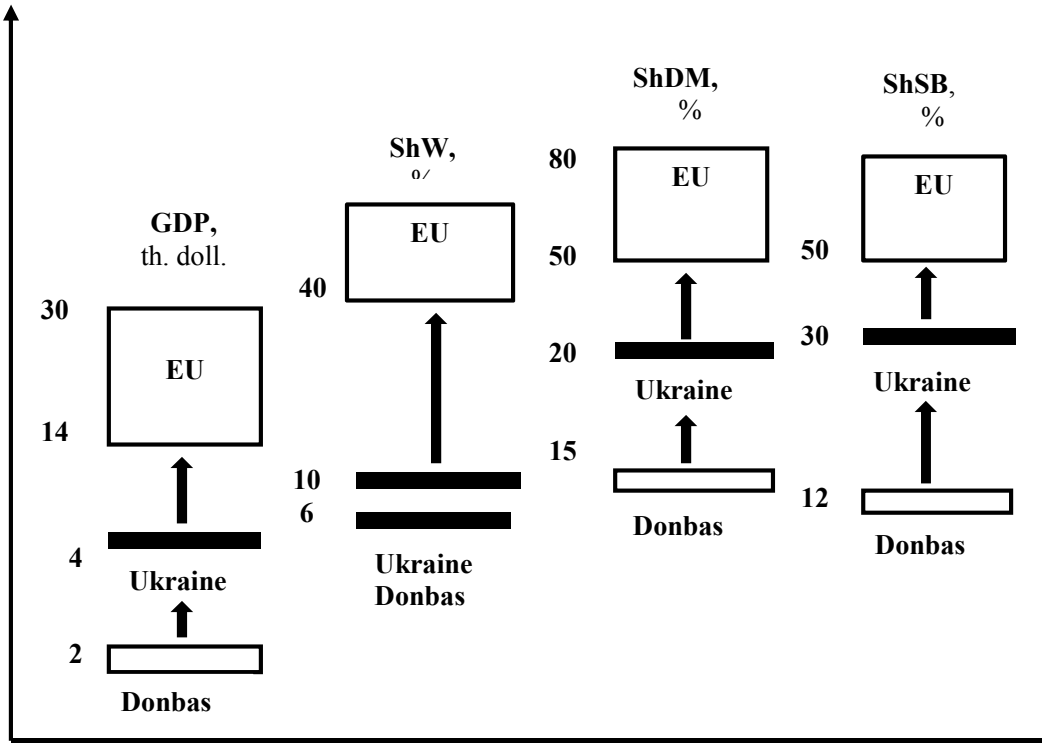

Fig. 1. A comparison of the socio-economic indicators of countries Of European Union (EU), Ukraine and the Donbas

It is obvious certain correlation between considered rates. Higher levels of any of them correspond to larger values of others. The indicator for the European Union is higher than for Ukraine in general, and for Donbas, including. The arrows in Fig. 1 show the required direction of changing the values of economic indicators for Ukraine and the Donbas, but the questions arises: how to run a mechanism for increasing the values of these indicators, with some indicators should begin as prevent inflationary process?

Obviously, the start-up of the domestic market requires a systematic effect on the shift on values in Fig. 1 in side of the bands specific to the EU. Is it possible to improve the existing structure of strong performance by anyone of the main chains? It is clear that a small share of wages in the cost of production in Ukraine is due to low wages that determines the generally low income levels, and this in turn is reflected in the low share of the domestic market. The average salary in Ukraine is about 4000 UAH, but this figure is calculated taking into account the very high (up to 100 thousand UAH) salary of senior executives of enterprises, banks and other organizations that share in the number of workers is insignificant. Therefore, the "median" salary, that is the salary of the average Ukrainian, about 30% lower. Namely, the median wage determines solvency of the population in the domestic market, in particular – respect to domestic products, while paying of segment of the population with the biggest income designed for the purchase of im-

ported luxury items, expensive cars, foreign real estate, and so on.

However, we cannot get a definite answer to the question: low wages in Ukraine – it is a consequence or a cause of the weak domestic market? It is understood that the mechanical increase in wages without an increase in sales volumes in the domestic market – a direct path to inflation. On the other hand, increasing the volume of sales on the domestic market is impossible without major investments in companies, whose products are not intended for export, but for internal consumption. Unfortunately, the benefits of the Association of Ukraine with the EU by the new investment opportunities of the European capital in the development of the domestic market of Ukraine, still remains out of focus.

About the role that EU could play in this direction can be seen on the example of Eastern European countries. For example, Slovakia, which had earlier approximately equal to Ukraine its socio-economic indicators, after spending several years in the EU as a result of the extensive investment program increased its GDP per capita up to 23 thousand dollars. Also, Poland, which had a much worse initial conditions than Ukraine, becoming in 2004 a full member of the European Union, through the German investment became sixth economics in the European Union (EU) [10]. Similar processes are common to other Eastern European countries included in the EU, so we can expect decisive for Ukraine could become a serious investment from Europe to the development of the domestic market of Ukraine, and especially the Donbas.

The fact of last massive investment of Russian capital into Donbas is a testament to its high investment attractiveness. Thus, the first and largest facility of Russian investment in the Luhansk region was Lisichansk refinery. In 2010-2011, under the control of Russian business moved Alchevsk Metallurgical Plant, a Russian company then bought Luhansk locomotive Plant, major Russian capital invested in Stakhanov Wagon Works and other businesses. Termination of Russian investment prepares the base for the arrival of investment from the EU.

It becomes evident next shown in Fig. 2 chain of factors of recovery the internal Donbas market.

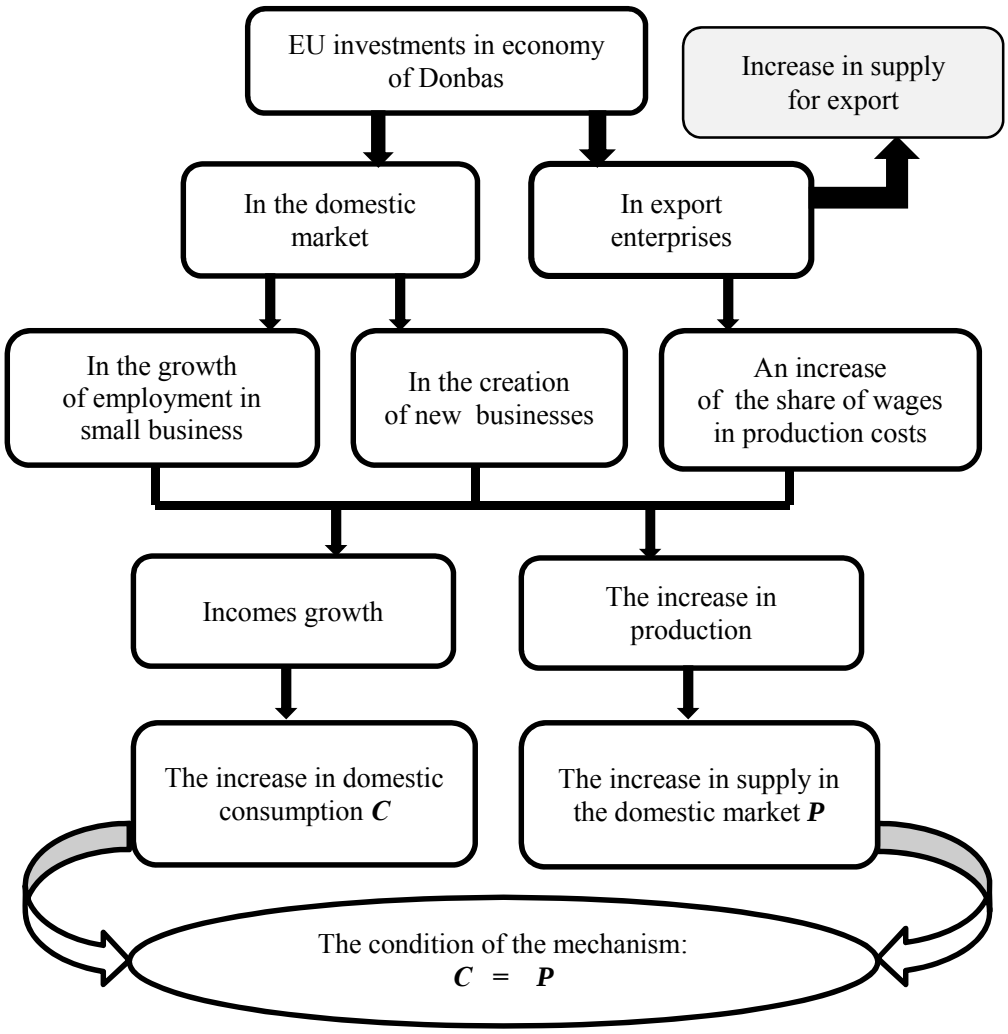

Fig. 2. The chain of the factors of economic mechanism of recovery the internal market of Donbas

The central point of this mechanism is additional investment in the economy of Donbas aimed to increase wages in the sphere of production of domestic consumption.

That would increase of purchasing power of the population did not stimulate growth in consumer prices, it is necessary to control a proportional growth of wage in the production of items of domestic consumption and the growth of share of the domestic market in total sales. This would support a dynamic balance between the growth of purchasing power in the domestic market $\boldsymbol{C}$ and additional products in this same market $\boldsymbol{P}$, i. e. $\boldsymbol{C} = \boldsymbol{P}$.

The launch of this mechanism requires the concerted action of a legislative nature, governmental decisions and decisive action with regard to the business increase hourly rates of wages, salaries, additional payments from profits on the background of falling tax burden on labor, the introduction of a progressive scale of taxation of high incomes.

Conclusion. Non-inflationary economic mechanism of recovery the internal market of Donbas should be based on attracting foreign investment in additional production volume in the domestic market, balanced with an increase in purchasing power of population of region.

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Колосов А. М. Чинники економічного механізму відновлення внутрішнього ринку Донбасу

Наведено порівняльний аналіз економічних показників Європейського Союзу, України та Донбасу, як її частини. Показано, що підвищення рівня оплати праці, частки заробітної плати в собівартості продукції, частини внутрішнього ринку в загальному обсязі продажів, розвиток малого бізнесу в Україні та Донбасі можливі тільки на основі значних європейських інвестицій, але не тільки в експортні підприємства, але й в розвиток внутрішнього ринку для виробництва продукції внутрішнього споживання. Це неминуче має стати фактором поступального підвищення заробітної плати та інших доходів громадян. Центральним моментом запуску даного механізму, що виключає інфляційні процеси, є забезпечення динамічної рівноваги між обсягом додаткової продукції, що надходить на внутрішній ринок, і зростанням оплати праці у сфері виробництва продукції внутрішнього споживання.

Ключові слова: Донбас, Україна, Європейський Союз, економічний механізм, чинник, рівень оплати праці, частка заробітної плати в собівартості продукції, частка внутрішнього ринку, зайнятість у малому бізнесі, інвестиції, внутрішній ринок, обсяг пропозиції, обсяг споживання.

Колосов А. Н. Факторы экономического механизма восстановления внутреннего рынка Донбасса

Приводится сравнительный анализ экономических показателей Европейского Союза, Украины и Донбасса, как ее части. Показано, что повышение уровня оплаты труда, доли заработной платы в себестоимости продукции, части внутреннего рынка в общем объеме продаж, развитие малого бизнеса в Украине и Донбассе возможны только на основе значительных европейских инвестиций, но не только в экспортные предприятия, но и в развитие внутреннего рынка для производства продукции внутреннего потребления. Это неизбежно должно стать фактором поступательного повышения заработной платы и других доходов граждан. Центральным моментом запуска данного механизма, исключающего инфляционные процессы, является обеспечение динамического равновесия между объемом поступающей на внутренний рынок дополнительной продукции и возрастанием оплаты труда в сфере производства продукции внутреннего потребления.

Ключевые слова: Донбасс, Украина, Европейский Союз, экономический механизм, фактор, уровень оплаты труда, доля заработной платы в себестоимости продукции, доля внутреннего рынка, занятость в малом бизнесе, инвестиции, внутренний рынок, объем предложения, объем потребления.

Kolosov A. M. The Factors of Economic Mechanism for Recovery the Domestic Market of Donbas

The comparative analysis of the economic indicators of the European Union, Ukraine and the Donbas as part of it. It is shown that an increase in the level of wages, the wage share in the cost of production, the share of the domestic market in total sales, small business development in Ukraine and Donbas are possible only on the basis of significant European investment, but not only in the export enterprises, but also in the development of the internal market for the production of domestic consumption. It must inevitably be a factor in the progressive increase in wages and other incomes. The central point of the launch of this mechanism, excluding inflation, is to provide a dynamic balance between the volume coming to the domestic market additional products and an inic consumption.

Keywords: Donbas, Ukraincrease in wages in the sphere of production of domeste, European Union, economic mechanism, factors, level of wages, wage share in the cost of production, share of the domestic market in total sales, small business development, investment, domestic market, volume of supply, volume of consumption.

Received by the editors: 26.10.2015
and final form 28.12.2015

UDC 336.74+336.77:339.923(438)

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CHALLENGES FOR THE NOMINAL CONVERGENCE IN POLAND IN THE FACE OF THE UNIFORM POLICY OF THE EUROZONE

1. Introduction

A common European Union currency has been in retail use for slightly more than a decade now. Nonetheless, this short period of usage is enough to conduct various theoretical and empirical analyses of the single-currency area in Europe.

The theoretical aspect of the research on the Eurozone should also focus on the issues of quality of the pre-accession policy. In this context, the manner of determining the monetary and fiscal policy prior to accessing a monetary union becomes of considerable importance. The level of convergence of fundamental parameters of these policies (in particular their interest rates, inflation, budget deficit) constitutes a key factor conditioning the efficacy of the process of monetary integration itself. Another problem is the possibility to diverge economic indexes in the countries which already belong to the monetary union. A good example is assessing the efficiency of monetary impulses generated by a supranational central bank. Different features of monetary policies of particular member states, especially those concerning the state of liquidity of the commercial banking sector and the mechanism of financial allocation, may distort the character of the mechanism of monetary transmission, leading as a result to divergence in the level of interest rates and/or inflation. A key role in shaping the monetary sphere within the area in question shall thus be attributed to the scope of reputation of the supranational central bank.

The above deliberation gives background to the main aim of this work which is the presentation of the theoretical aspects of the process of convergence in the monetary sphere in the pre- and post-accession period as well as the assessment of the level of Poland's convergence with the Eurozone in the context of the uniform policy of the European Central Bank.

2. Variants of pre-accession monetary and fiscal policy

The stability of the Eurozone is considered both through the prism of the conditions which should appear in the course of its functioning and the conditions formulated in the pre-accession period. Of particular importance in this period is the shape of the monetary policy which has an influence on two main parameters of the monetary sphere, i.e. the inflation rate and the interest rate. It is assumed that Poland's accession to the Eurozone will take place in a few years' time, e.g. in the period t + n, where t constitutes the present time (figure 1). It means that in order to fulfil the convergence criteria in the monetary sphere (as well as the fiscal and foreign exchange spheres), adequate adaptations must take place within n years. In this respect, we may specify two extreme variants.

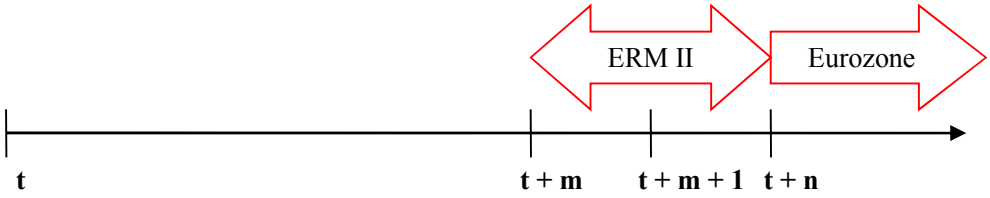

Fig. 1. Time periods on the way to the Eurozone

Source: the authors' self-analysis.

Variant I would consist in fulfilling the monetary criteria, especially inflation, even prior to joining ERM II. Variant II would consist in not achieving monetary borderline values before the exchange rate between the Polish zloty and euro has been fixed. It is assumed that not achieving the borderline values means a lack of any adaptations in the monetary sphere [Błaszczyk, Zwierzchlewski 2008].

The effects of the monetary authorities' actions required to lower inflation in variant I could be less harmful to the real sphere of the economy if they were spread in time for the period (t, t + m). The National Bank of Poland (NBP) could reduce the inflation by shaping inflation expectations properly, thus avoiding an excessive growth in the interest rate. It has to be highlighted, however, that strict requirements for fulfilling the infla-

tion criterion may persist in the future. In such a case, the monetary authorities will have to take more restrictive measures resulting in a slowdown in the real GDP growth and its consequences for the employment sphere. On the other hand, these hardships may be less harmful since they are spread in time. It seems, however, rather unlikely to attain the economic results making it possible to join the Eurozone in a painless way, especially for such countries as Poland, where the unemployment rate is relatively high.

A positive consequence of realising variant I may also be great stability of the Polish zloty in the European trading band. It results from a smaller scale of adaptations of monetary instruments in the period (t + m, t + n) due to their active adaptation in the period (t, t + m). Thus, the interchangeability between the inflation and nominal appreciation would be split in time, making it possible to reduce the inflation prior to joining ERM II and to ensure a stable exchange rate of the Polish zloty to the euro with a fluctuation band of ±15%. It shall be highlighted that there exists a method in variant I in which the exchange rate of the zloty may be changed. This method consists in the possibility to negotiate the level of the parity rate while joining ERM II. It results from the fact that the central parity does not have to be settled at the level which is equal to the current nominal rate existing at the time of currency stabilisation. One consequence of realising variant I would be a stronger negotiation position of Poland following, first of all, overestimation of the exchange rate of the zloty, differing considerably from the level of a long-term balance rate resulting from earlier actions in the monetary and fiscal spheres, and secondly, a negative influence of an excessively strong currency on the unemployment rate in Poland.

Variant II assumes failure to fulfil the convergence criteria prior to bringing the zloty to ERM II. Consequently, there will be a necessity to fulfil these criteria in the first year of membership in the currency mechanism (t + m, t + m + 1). This necessity results from the divergence between a two-year reference period in the currency rate sphere and a one-year reference period for the other criteria. The application of variant II would entail a severe fiscal and monetary restriction accumulated in time. An unquestionable effect of such actions would be a shock in the real sphere of the economy. Possible economic actions within the variant under discussion would also entail some destabilising effects for the exchange rate of the zloty in ERM II. The scale of destabilisation would depend on how severe the Balassa-Samuelson effect would turn out to be and on the scale of the speculative capital flow. With a large strength of both of the criteria, simultaneous reduction in the inflation and control of the currency exchange rate (within the band of ±15%) would be very difficult to reconcile. It seems, however, that practical realisation of variant II is rather unlikely to happen, especially in the face of a large internal imbalance in the Polish economy.

3. Selected problems of uniform monetary policy in the Eurozone

Stability of the Eurozone requires convergent monetary order with convergent inflation and interest rates. The monetary order specifies the bases for the functioning of a central bank, including above all the available instruments, priorities in conducting the monetary policy and its institutional framework[1]. This creates fundamental elements of the order in question in the form of the level of the interest rate, the level of the inflation and the manner in which these variables are determined including the scope of political independence and economic responsibility of the central bank.

Divergence of the monetary sphere components may lead to the occurrence of negative economic phenomena threatening the stability of the single-currency area. For instance, in countries with lower inflation common monetary policy would become overly restrictive (due to a high real rate), having a negative effect on the level of employment and the domestic product, whereas in the countries where inflation is higher it would be too expansive (due to a low real rate), which would be conducive to a further increase – rather than decrease – in inflation. Thus, on the one hand the situation on the labour market would worsen, yet on the other hand, inflation tendencies, including inflation expectations, would strengthen [Błaszczyk 2010, p. 56]. Assuming a uniform inflation rate, divergent values of the market interest rates would divide the level of real rates, which would curb economic development or hinder maintaining the same level of inflation in the Eurozone member states.

In economic reality there may, however, occur differentiation of the levels of inflation and interest rates in particular member states of the Eurozone despite the fact that the monetary instruments which influence the values of the above variables are specified in a centralised system. A factor which influences the (different) level of interest rates is the character of the mechanism for transmitting the monetary policy. Of particular importance here is the aspect of an external delay of this policy. In most general terms, it may be described as the time that the economy needs to adapt itself to new conditions created by the change in the economic instruments [Kowalski 2001, p. 81]. The character of the delay in question is determined by the institutional framework specified in a given country within the scope of commercial banks, including the character of relations between these banks and a central bank and between private banks and the real economy. This character may differentiate the monetary sphere in member states, since it was previously (prior to accession) determined by individual practice of relations between national central banks and the sector of financial mediation as well as between this sector and households and enterprises.

[1] A monetary order in more general terms also refers to the type of monetary signs and principles of financial settlements used in a given country [Narolewska 2001; Jurek, Knakiewicz, Marszałek 2011].

If the relations between these links were different in reality, it would be difficult to make them uniform after the accession to the Eurozone of particular states, at least in a short-term perspective [Dornbusch, Favero, Giavazzi 1998]. That is why different levels of the liquidity of banking sectors or different characters of the mechanism of financial allocation[1] in these countries may create divergent reactions of private banks to the transmission of monetary impulses from a common central bank and the real sphere of the economy to the changes in the market rates in the banking sector.

Specifying the types of inflation constitutes the basis for establishing the causes of the possible differentiation of its levels in the Eurozone. For example, an interest rate is an important determinant of demand, since it creates the size of a bank loan. That is why the abovementioned factors which differentiate the level of interest rates have an influence also on the levels of inflation in particular member states. What has to be taken into account at this point is a growing influence of the so-called credit intermediaries which are usually not subject to supervision by the monetary authorities. These entities may increase the credit expansion in the periods of restrictive monetary policy, and thus distort the transmission of the policy of a common central bank [Duwendag et al. 1996, p. 160]. This problem becomes even larger (due to the differences in the levels of inflation) when there is uneven concentration of these entities among the monetary union member states.

With the existence of the factors which may distort the monetary order in the Eurozone, of particular importance becomes the issue of the reputation of a supranational central bank, and thus the quality of the common monetary policy. The main problem is the fact that the credibility of a central bank cannot be built overnight. However, this process may be efficiently shortened by applying adequate institutional solutions with respect to central banking in the Eurozone. The components of these solutions are the following:

building a common central bank in accordance with a specific adopted model,

specifying an *explicite* goal (or goals) of the common monetary policy,

granting the bank in question complete political and functional independence and minimising its formal responsibility for realising its own goals,

determining an *explicite* manner of specifying an interest rate and exchange regulations.

Assuming in advance a certain point of reference for the form of a common bank may cause the economic and private entities to accept and place confidence in the new monetary authorities without much hesitation. A necessary condition for this is relatively early information concerning the assumed model and its prestige. That is why a commonly accepted central bank must serve as a point of reference. The determinants of the bank's good reputation should be the following: high efficiency in realising goals and clear rules of communication with the environment. It also seems favourable to choose such a bank model from the group of states which make up the monetary union.

Economic benefits coming from low inflation and the necessity to maintain the inflation at a similar level among the Eurozone member states should be a final determinant for selecting a superior goal of the common monetary policy of the union in the form of a stable price level. Assuming a principle that the goal of this policy will be to attain more than one aim, e.g. low inflation, high employment rate or high financial stability within the monetary union, forces economic and private entities to settle which aim shall become more important (in the short- and long-term periods). This may result in considerable decline in confidence to a common central bank from the viewpoint of price stability and distort the monetary order in the union.

The conditions in which the monetary authorities are created in the Eurozone should also serve as a determinant for granting a full scope of political and functional independence to these authorities. The manners of functioning of the authorities in question may be determined in the course of international arrangements or in the course of such arrangements together with the aid of an independent organ of the union consisting of a group of experts [De Cecco, Giovannini, CUP, Cambridge 1989], above all in the area of central banking. It is difficult to determine the entity on which a common central bank would be (more or less) politically dependent and obliged to account for the effects of its actions. Such an entity could not definitely be any of the national parameters due to the negative political connotations of choosing such a solution. Any scope of dependence on and responsibility to an organ of the union would require granting it broad prerogatives in order to exercise power within the area of the Eurozone. In reality, this would entail the presence of a political and currency union characterised both by complete integration of the monetary sphere and the existence of the supranational legislative and executive authorities. Such a high level of politicising is, however, a feature of higher forms of integration with reference to the monetary union. Similar reasons justify equipping a common central bank with unlimited competences concerning the establishment of the levels of interest rates and other instruments of the monetary policy. A logical reason for granting full functional independence is also the structure of goals of the common monetary policy, including above all the realisation of the superior goal [Bofinger 2001].

Specifying by a common central bank a uniform range of monetary instruments for all member states of the union creates a problem of choosing its most optimal

[1] The condition of the liquidity of the banking sector is one of the factors which influence the time and strength of reactions of commercial banks to a change in the values of the instruments of a central bank, whereas the mechanism of financial allocation determines to a large extent the time and strength of reactions of enterprises to a change in market interest rates.

shape. Of particular importance is the choice of the best possible interest rate in the case when there occur differences in the levels of inflation in particular Eurozone member states. The credibility of the bank in question will depend on how precisely it will be able to explain to the society the method of selecting the level of the interest rate. In order to strengthen this credibility, the interest rate level should be placed in the middle of the interest rate range desired by particular states. Most states would then be eager to accept the current level of the interest rate in relation to the inflation rate. In this context an important element of constructing the institutional framework for a common central bank is its organisational structure, and especially the shape of the process of implementing decisions. An optimal solution would be a centralised structure which would accumulate this process in the hands of one decision-making group that would be autonomic in relations to particular member states of the union. In a centralised system it is much easier to determine a certain value of the interest rate with a different arrangement of inflation levels within the Eurozone area. It shall be assumed, however, that the national monetary authorities will want to obtain a considerable influence on the policy of the common central bank. If the decision-making process is decentralised in this bank and national interests begin to dominate the interests of the entire system, it will be quite difficult to reach a consensus concerning the level of the interest rate with a symmetrical and asymmetrical arrangement of the inflation rate.

The main determinant of currency relations in a monetary union is a lack of the possibility to correct the nominal currency rate. A rational assumption may be made at the same time that the international exchange between particular member states constitutes the main part of their foreign trade. In such a situation, developing competitiveness of each of the economies in the union requires reducing the costs of production, and consequently reducing the inflation rate. It should result in a growth in competitiveness of the entire integration group in relation to third countries and constitute at the same time an important factor increasing confidence in the common currency. Furthermore, this is also a reason for focusing on stabilising the financial sphere within the monetary union, and not on maintaining a stable rate of the common currency in relation to a selected reference currency.

4. Assessment of nominal convergence in Poland in the face of the Maastricht convergence criteria

The main threat of and fear for joining the Eurozone is the loss of the autonomic, national monetary policy and the possibility of a discretional influence of this instrument on the economy. In order to neutralise this negative aspect of accession, it is necessary to adequately conduct convergence, both nominal and real, as well as monetary, fiscal and foreign exchange. It may cause a uniform policy of the European Central Bank (ECB), both in the sphere of goals (with price stability being a superior goal) and instruments (the main instrument being a short-term interest rate) to be adequate for Poland and to be conducive to the economic growth. In such a case, it seems beneficial to conduct regular assessment of convergence, including the nominal convergence, with the Eurozone.

The assessment in this work concerns the Maastricht criteria of the nominal convergence. These criteria should be viewed not only from the prism of the necessity of their fulfilment in order to join the Eurozone (possibly in a quick and unstable manner), but also as the areas where the convergence with the monetary union shall ensure benefits to the member states. Of the main interest is the criterion concerning the general price level dynamics, since it is the value (and more precisely price stability) which determines a strategic and superior goal not only of the ECB but also the majority of central banks around the world, including the NBP. The other convergence criteria may be viewed from the prism of the conditions of the monetary policy which influence the price dynamics. Thus, their convergence has an influence on the efficacy of this policy.

On the one hand, fiscal parameters (the deficit and the public finance sector debt) are positively correlated with the price dynamics. For instance, overly expansive fiscal policy, much as it causes an increase in the parameters, influences in the same direction the inflation and distorts its stability. An unstable currency rate also distorts the price stability. In this case, the interrelations are also positive – a growth in the rate (assuming it is depreciation – direct quotation) stimulates the inflation. Reversed relations occur, on the other hand, in the case of the interest rate influencing the price dynamics. The above-presented relations indicate the necessity to coordinate various areas of the economic policy (monetary, fiscal and if need be – treating it separately – foreign exchange). Only this policy can ensure long-lasting fulfilment of the Maastricht criteria and increase in the long-term the benefits of joining the area of a common European currency. The results of this part of the research will indicate among all, firstly, which of the criteria constitute the main barrier for Poland's accession to the Eurozone, and secondly, in which years Poland was "closest" to the Eurozone.

In order to conduct the assessment of convergence in such a depiction, a few assumptions have been made. First of all, the examination encompasses the period between 2004 and 2014. The initial turning point is Poland's accession to the EU, which gives the possibility to apply for joining the Eurozone, whereas the final point is determined by the availability of the data, especially bearing in mind next assumptions. Secondly, the assessment encompasses five convergence criteria laid down in the Treaty of Maastricht. Thirdly, the assessment is conducted at the end of particular years. Fourthly, the assessment uses the Eurostat data taken from its webpage in September 2015. Next, the authors have made an assumption concerning convergence with respect to price stability that the states which are characterised by the negative general price level dynamics

cannot play reference roles [1]. Finally, the examination omits the assessment concerning the foreign exchange criterion.

The assessment of Poland's convergence in this area seems difficult due to a lack of specified central parity for the ERM II system. It shall be highlighted, however, that the exchange rate is a macroeconomic value which cannot be controlled precisely, especially under the conditions of the independent floating system. The changes in the system are influenced also by the factors which do not depend on the national economic authorities and which are frequently unpredictable, e.g. a financial and economic crisis. Additionally, is shall be emphasised that currency tensions may occur in the future as a result of the activities within the economic policy aiming at fulfilling the other Maastricht criteria. In particular, a strong connection with the general price level dynamics through the main factor shaping both values, i.e. the interest rate, should be noticed. With the above circumstances, the criterion in question should not be underestimated by the economic authorities. Comprehensive results of the assessment in the remaining four areas are presented in figure 2 and in table 1.

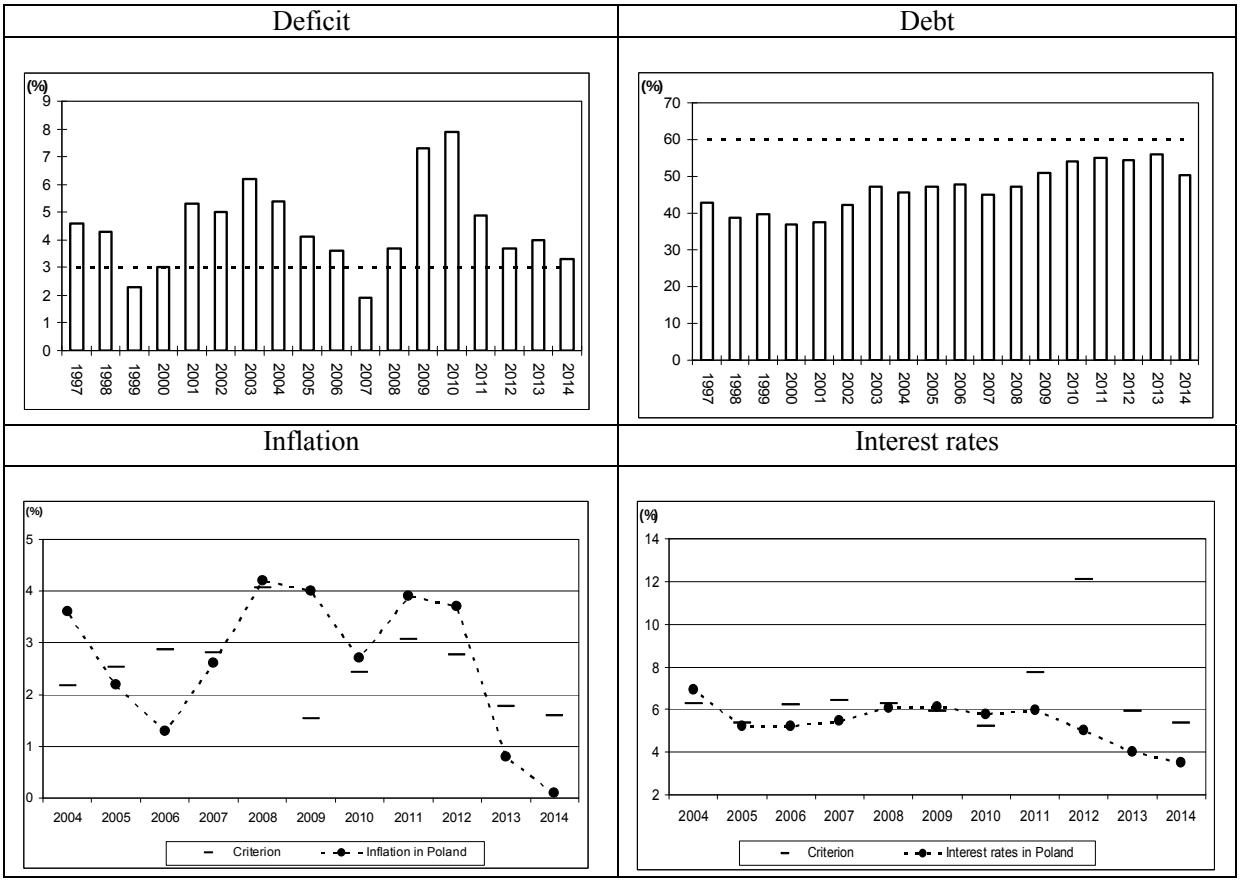

Fig. 2. Nominal convergence criteria in Poland in the period 2004-2014

Source: prepared by the authors on the basis of the Eurostat data.

Analysing the table horizontally, one may conclude that the worst assessment goes to the criterion of the public finance sector deficit. In fact, it constitutes the greatest barrier for Poland's accession to the Eurozone. The borderline value was not exceeded only in 2007. From that year on, the deficit in relation to the GDP had grown over the next three years and exceeded considerably the allowable 3% (in the years 2009 and 2010 the index in question amounted to 7.3% and 7.9% respectively). Only in the year 2011 was there a decline in the relation under analysis to 5%, and in the years 2012-2014 a decline to the value between 3 and 4%. Fulfilling the reference criterion in this respect will be extremely difficult in the following years and will require strict policy from the fiscal authorities, especially in the face of post-election political disturbances which took place at the end of 2015. It seems to be the main challenge for Poland on its way to the Eurozone.

[1] It shall be noted that in 2004 the European Commission decided to eliminate Lithuania from the reference states in their reports on convergence, since this country was then characterised by negative HICP dynamics. Yet in 2010, when a few EU member states were undergoing deflation (Ireland, Portugal, Estonia, Belgium, Spain), the European Commission decided arbitrarily to eliminate only Ireland from the reference states, since it had the greatest deflation rate.

Table 1

Nominal convergence criteria in Poland in the period 2004-2014 - summary

Criterion \ Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Debt	+	+	+	+	+	+	+	+	+	+	+
Deficit	-	-	-	+	-	-	-	-	-	-	-
Inflation	-	+	+	+	-	-	-	-	-	+	+
Interest rates	-	+	+	+	+	-	-	+	+	+	+

Remark: the sign "+" in a particular cell means that a given criterion would be fulfilled in a given year, whereas the sing "–" means failure to fulfil the criterion.

Source: prepared by the authors on the basis of the Eurostat data.

Furthermore, it is worth highlighting that despite positive assessment of the second (fiscal) criterion concerning the relation of the public debt to the GDP, it has been characterised by an ascending tendency since 2007. In 2011 it amounted to 56.4%, and in 2012 to 55.6%, i.e. the highest value in 15 years, which – according to the act on public finance – requires adequate precautionary and reformatory procedures to be applied [Act of 27 August 2009 on public finance, Article 86, 87]. In the following years its value stabilised, and even decreased a little. However, if there appears a growing tendency in the next few years as far as this index is concerned, e.g. in the face of after-election irrational fiscal policy, and especially a lack of reforms within public finance, there may occur problems with fulfilling the reference value in this area in the future. Additionally, such a direction of budget policy may be a long-lasting stimulus increasing the price dynamics, and consequently posing a threat to the common uniform monetary policy.

Crucial problems may also concern price stability itself, which generally is an effect of the relative character of this criterion [Błaszczyk, Zwierzchlewski 2005, pp. 17–18]. What follows from the assessment is that only in the years 2005-2007 would Poland fulfil the borderline values in this area. Bearing in mind quite a low value of this criterion (especially in 2009) on the one hand, and the fact that Poland – being a developing country – must accept slightly higher price dynamics on the other hand, it may be concluded that fulfilling the criterion in question (in the period prior to and following the accession to the Eurozone) may be troublesome. First of all, it will depend on external factors (which do not have a source in an interested country) such as price dynamics in reference countries as well as an arbitrary decision of the EC concerning the manner of estimating the borderline values (in the case of deflation). Secondly, fulfilling a low inflation criterion may require restrictive economic policy (mainly monetary), which may lead to negative consequences for the real sphere of the economy and higher costs of accession. The inflation criterion was either fulfilled or not fulfilled on alternate years. Similar remarks may be made with reference to the criterion concerning the interest rates.

Analysing figure 2 and table 1 vertically, we may conclude that the highest level of nominal convergence was achieved by Poland in 2007, when all criteria (except for the exchange rate which was not taken into consideration here) would be fulfilled. In the remaining years the criteria would not be fulfilled completely, which depicts the degree of convergence of the Polish economy with the Eurozone in a negative way. In the last two years there was certain noticeable progress. The only criterion which was not fulfilled was the budget deficit criterion, while the "distance" to its fulfilment was shortened by the economic authorities. It shall be highlighted that the process of convergence has a long-term character and only its durability may lead to the adaptation to common and uniform monetary policy, and thus bring the essential benefits of joining the monetary union. A reflection of this durability is the criterion of the long-term interest rate, which – interestingly – appears rather positive for Poland compared to the other criteria. These conclusions should, however, be treated with some caution due to the arbitrary assumptions made in the assessment as well as for the fact that Poland does not officially make any attempts to fulfil the criteria, and especially for the fact that it has not joined ERM II yet.

5. Conclusions

The examination conducted in this work indicate explicitly that the convergence of Poland with the Eurozone is low in the context of joining common and uniform monetary policy. The economy of Poland fails to fulfil the criteria conditioning the accession to the European monetary union, and it seems unlikely to change due to the fact that Poland lacks broadly understood convergence. There are some serious arguments indicating that the uniform policy of the ECB could not be adapted to Poland's economic conditions both in the nominal sphere as well as the real, monetary and fiscal spheres.

In the light of the above conclusions, Poland's accession to the Eurozone should be planned and conducted in a proper way, including an adequate time horizon and the character of social and economic conditions. It should match the process of broadly understood long-term convergence of the developing Polish economy. Only such a manner of accession may guarantee an active balance of benefits and costs of joining the Eurozone. The date of accessing the Eurozone should, first of all, be a secondary issue depending on the entire process of convergence, and secondly, it should be finally determined for the most favourable period in terms of the local and global financial and economic conditions. It should not certainly take place in the time of a crisis.

As has been shown in this work, the convergence of the Polish economy with the Eurozone in such circumstances was exceptionally low, especially in terms of the general price level dynamics. Additionally, what should also be taken into consideration is the uncertainty associated with the after-election transitional period. Its possibilities to stabilise will determine the perspectives for the nominal convergence in Poland and its accession to the Eurozone.

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Блашчик П., Звєжхлевський С. Проблеми номінальної конвергенції в Польщі в контексті єдиної політики Єврозони

Основна мета даного дослідження полягає в поданні теоретичних аспектів процесу конвергенції в області грошово-кредитної системи під час, до і після вступу Польщі до ЄС, а також оцінки ступеня польської конвергенції по відношенню до Єврозони в контексті єдиної політики Європейського центрального банку. Робота складається з двох основних частин: теоретичної та емпіричної. У першій частині представлено аналіз варіантів грошово-кредитної політики протягом періоду підготовки приєднання до зони євро і європейських дилем грошово-кредитної політики. У другій частині, на підставі досліджень представлених в першій частині, міститься оцінка польської інтеграції з Єврозоною в контексті єдиної політики Європейського центрального банку.

Ключові слова: номінальна конвергенція в Польщі, єдина політика, Єврозона.

Блашчик П., Звежхлевский С. Проблемы номинальной конвергенции в Польше в контексте единой политики Еврозоны

Основная цель данного исследования заключается в представлении теоретических аспектов процесса конвергенции в области денежно-кредитной системы во время, до и после вступления Польши в ЕС, а также оценки степени польской конвергенции по отношению к Еврозоне в контексте единой политики Европейского центрального банка. Работа состоит из двух основных частей: теоретической и эмпирической. В первой части представлен анализ вариантов денежно-кредитной политики в течение периода подготовки присоединения к зоне евро и европейских дилемм денежно-кредитной политики. Во второй части, на основании исследований представленных в первой части, содержится оценка польской интеграции с Еврозоной в контексте единой политики Европейского центрального банка.

Ключевые слова: номинальная конвергенция в Польше, единая политика, Еврозона.

Blashchyk P., Zvershchlevsky S. Challenges for the Nominal Convergence in Poland in the Face of the Uniform Policy of the Eurozone

The main objective of this study is to present the theoretical aspects of the convergence process in the field of monetary affairs during the pre- and after-accession period and evaluation of the degree of convergence of the Polish with the euro area in the context of a single policy of the European Central Bank. The paper consists of two basic parts: the theoretical and the empirical. In the first were presented a reflection on variants of monetary policy during the pre-accession period to the euro area and the European monetary policy dilemmas. In the second part, against this background, contains an assessment of the Polish convergence with the euro area in the context of a single policy of the European Central Bank.

Keywords: nominal convergence in Poland, uniform policy, Eurozone.

Received by the editors: 29.10.2015
and final form 28.12.2015

UDC 339.13:330.322(470)

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THE WAYS OF IMPROVING THE EFFICIENCY OF THE IMPORT SUBSTITUTION STRATEGY OF RUSSIAN FEDERATION

In the current geopolitical situation, due to the economic sanctions, import substitution is regarded as one of the priority areas for development of the Russian economy. Import substitution strategy is intended for the long term and should ensure the achievement of the objectives of the capacity and structure of domestic production while reducing the consumption of imported goods [1]. Consequently, there is a need to develop a system of measures, which will allow implementing the strategy of import substitution effectively and increasing the competitiveness of the national economy. Thus, one of the most promising directions of the import substitution policy is an innovative way of development, which will reinforce country's economic security, activate scientific and technical progress, as well as raise the level of education, increase the demand for domestic goods and expand production capacity.

The place and role of import substitution policy in the framework of the theory of the economic development of the countries examined A. Hirshman, K. Polani, A.N. Makarov, A.N. Ryakhovskaya, D.I. Ryakhovskiy, K.A. Gulin, E.A. Mazilov, A.P. Yermolov, A.G. Zhakevich, N.A. Kudrova, as well as other foreign and native researchers.

Import substitution is a strategy for the development of domestic production of goods, which will replace the currently existing import. However, the modern economy doesn't allow countries to develop effectively, relying solely on their own resources, completely abandoning import. Thus, I would like to note the importance of import to the Russian Federation.

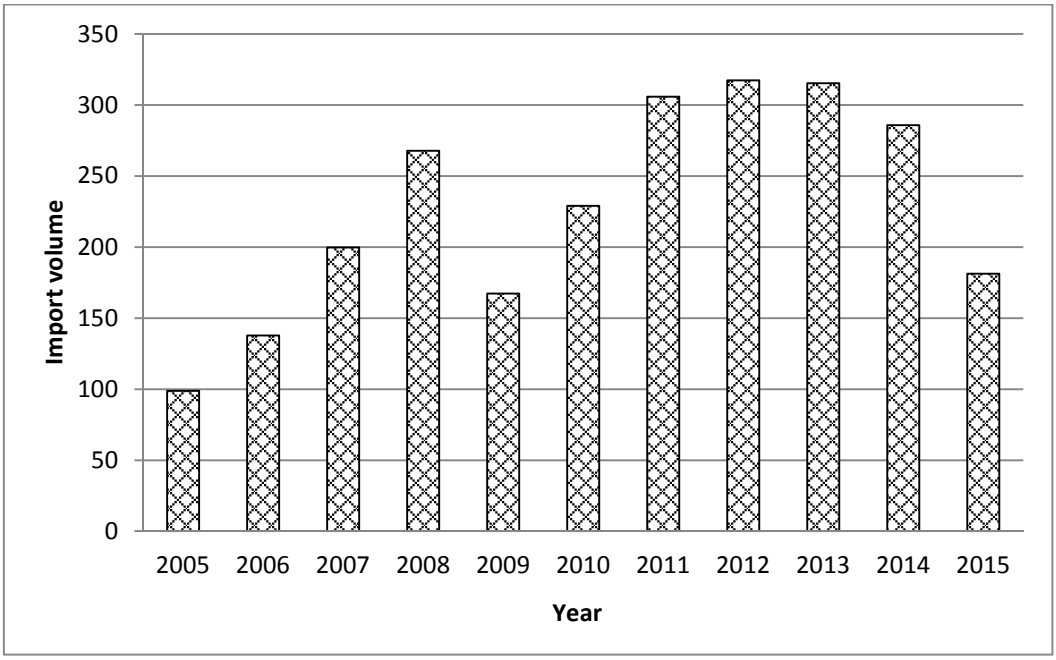


Fig. 1. The dynamics of import volume in the Russian Federation, US $ billion [2]

It is evident that import was increasing annually except 2009 which was caused by the financial crisis that led to a decline in industrial activity worldwide. This indicates that the level of development of the Russian production is far behind the world therefore it is cheaper and more profitable to import goods from abroad.

Nevertheless, in terms of sanctions and ban on the import of foreign products in Russia there is a significant change in the volume of import in 2014 and 2015. Thus, in 2015 imports amounted to US$181.3 billion compared to US$ 285.9 billion in 2014. Moreover, the highest degree of dependence on foreign manufacturers in many areas of the Russian economy has machinery, equipment and vehicles (see table 1). This makes up half

of total import, which undoubtedly causes a weakening of the economic security of the country.

The relevance of the security problem confirmed by the adoption a number of legislative acts in recent years of, such as the Presidential Decree of May 12, 2009 № 537 "On the Russian Federation National Security Strategy up to 2020," The Doctrine of the Russian Federation Food Security (app. Presidential Decree January 30, 2010 № 12) The doctrine of information security of the Russian Federation (approved by. the President of the Russian Federation dated September 9, 2000 № Pr-1895), the Federal Law of 28.12.2010 № 390-FZ "On security" and others [3].

Table 1

Commodity structure of Russian import [2]

Type of product	2000		2010		2014	
	US $ billion	%	US $ billion	%	US $ billion	%
In total	33,9	100	229,1	100	285,9	100
Machinery, equipment and vehicle	10,7	31,4	102	44,4	136,2	47,6
Chemical industry products	6,1	18,0	37,0	16,1	46,4	16,2
Food commodities and agricultural raw materials	7,4	21,8	36,4	15,9	39,7	13,9
Metal and precious stones industry	2,8	8,3	16,8	7,3	19,2	6,7
Textile fabrics, textile goods and footwear	2,0	5,9	14,1	6,2	16,3	5,7
Wood, pulp and paper production	1,3	3,8	5,9	2,6	5,9	2,1
Mineral commodities	2,1	6,3	5,2	2,3	7,2	2,5
Tanning raw materials and furs	0,1	0,4	1,2	0,5	1,3	0,5
Others	1,4	4,1	10,5	4,7	12,6	4,4

Nowadays the Accounting Chamber has come to the conclusion that Russia cannot cope with the full import substitution of the products fallen under the embargo. This was stated by experts in a prepared statement Accounting Chamber "On the Federal Budget for 2015 and the planning period of 2016 and 2017". Based on the data of Rosstat, experts firstly point out the import problem of certain types of meat and dairy products. In particular, the level of spare capacity in the meat processing industry amounted to about 34%. At the same time import accounted for almost 59% of total beef consumption in the country, the share of imported from abroad reached 31% of pork, poultry meat - 13% [4].

Besides the AIC sectors essentially important import substitution is represented in such industries as machine tools, heavy machinery, including the agricultural and food industry, electronics, light industry, medicine and pharmaceuticals. Thus, there is a necessity for weakening the technological dependence of Russia by organizing the program of import substitution and concentration of R & D and other financial and human resources in areas where the critical dependence on foreign companies without which national production ceases to exist have been formed.

In the XX century to the import substitution policy have resorted Latin America, Africa and Asia. It is accepted to distinguish eleven countries that due to the implementation of such policy have achieved significant economic success and join the ranks of the industrialized countries - Brazil, Chile, China, India, Indonesia, South Korea, Malaysia, Mexico, Taiwan, Thailand and Turkey [5].

Having studied the international experience of the import substitution process, there are three main options for the implementation of the import substitution policy as a priority of economic development at the national level.

The first option assumes relatively weak stimulation of industries which products are uncompetitive compared to imported analogues, even on the domestic market. Tools of this kind policy are import restrictions, foreign investment, restructuring of public sector enterprises and long-term investments in infrastructure and education. Example of this type of import substitution policy is the experience of Brazil, the USSR, the People's Republic of China and Latin America.

For instance, in Argentina the import substitution policy in the 1950's was carried out mainly in the oil and steel production, chemical and automotive industry. Various tools to stimulate import substitution were provided for individual industries and regions. In particular, the reduction of provision rate enabled banks to finance projects on import substitution at a much lower interest rate. In Colombia, differentiated exchange rates were introduced and non-traditional goods exporters could sell their products at free-floating exchange rate. In Pakistan high import duties were imposed on consumer products and relatively low on equipment and raw materials. In South Korea and Taiwan high import duties were imposed on products for which there was an internal analog and lower on those that didn't have local analogues.

In the second option the state support is directed to the new promising market segments, when the company entering this market needs preferences which will provide them a competitive advantage in the initial stage. In the future, government support is reduced and then completely cut off. Tools of this type policy are borrowing of advanced technology orientation, foreign investment

attraction, change in the structure of population savings and consumption as well as public investment in industrial infrastructure and small businesses support. By way of example, the East Asian countries have been able to organize and develop new industries from scratch, including high tech (mechanical engineering, microelectronics, etc.).

An example of this type of policy is also the experience of India, which in 1950 declared the construction of a "self-sufficient" economy. The country's priority industries have been identified, the development of which was to generate sustainable economic growth. Import substitution policy was based on the creation of a large public sector in the fields of heavy industry and indicative planning. By the end of 1960 the share of public sector in production has reached almost 25%, including in the mining industry - almost 90%, in manufacturing - over 15%. The share of state-owned enterprises accounted for 75% of steel production, 100% of the production and processing of oil, 95% of electricity and 80% of the issue of heavy engineering products.

The third option implies that the main goal of the state policy is to support competitive industries and firms that are active in export activities. Such strategy was followed by USA, Japan, Taiwan, India, China, South Malaysia, Thailand, the Philippines and others at the end of the last century. Import substitution policy instruments of this type are intensive modernization of high-tech industries, new technologies and government policy on improving product quality, export support, development of social and industrial infrastructure as well as fundamental and applied R&D.

Thus, since 2007 there has been intensification of investment activity in China and India (figure 2). Despite the fact that the United States is a leader in terms of innovation costs, the highest number of R & D carried out in Asia and not in North America and Europe [6]. Among industries, the computing and electronics, healthcare, and auto sectors continued to spend the most on R&D. In total, they accounted for 62 percent of innovation spending (figure 3). However, R&D spending by computing and electronics companies fell 0.7 percent in 2015, whereas R&D spending by healthcare companies rose 6.0 percent. The healthcare sector is closing in on the number one position. But the biggest movers among industries have been software and Internet companies. The industry increased R&D spending by 27.4 percent between 2014 and 2015. Software and Internet also had the largest average growth of any industry over the last 10 years – 13.2 percent – and passed industrials in 2015 to become the fourth-largest industry in terms of R&D spending [6].

At the same time, based on an analysis conducted by the Ministry of Industry in 2014, the most promising sectors in terms of import substitution in Russia are machine tools, heavy machinery, light engineering and electronics industry, the pharmaceutical and medical industry. The process of import substitution in these sectors can be started only in case of spare capacity and competitive enterprises that could offer high quality products at market price. Reduction of dependency on imported products is possible due to innovation and investment stimulation in high-tech industries and establishment of the new industries. "It is expected that by 2020 Russia will be able to count on reducing reliance on import in different sectors from almost 70-90% to 50%" [7].

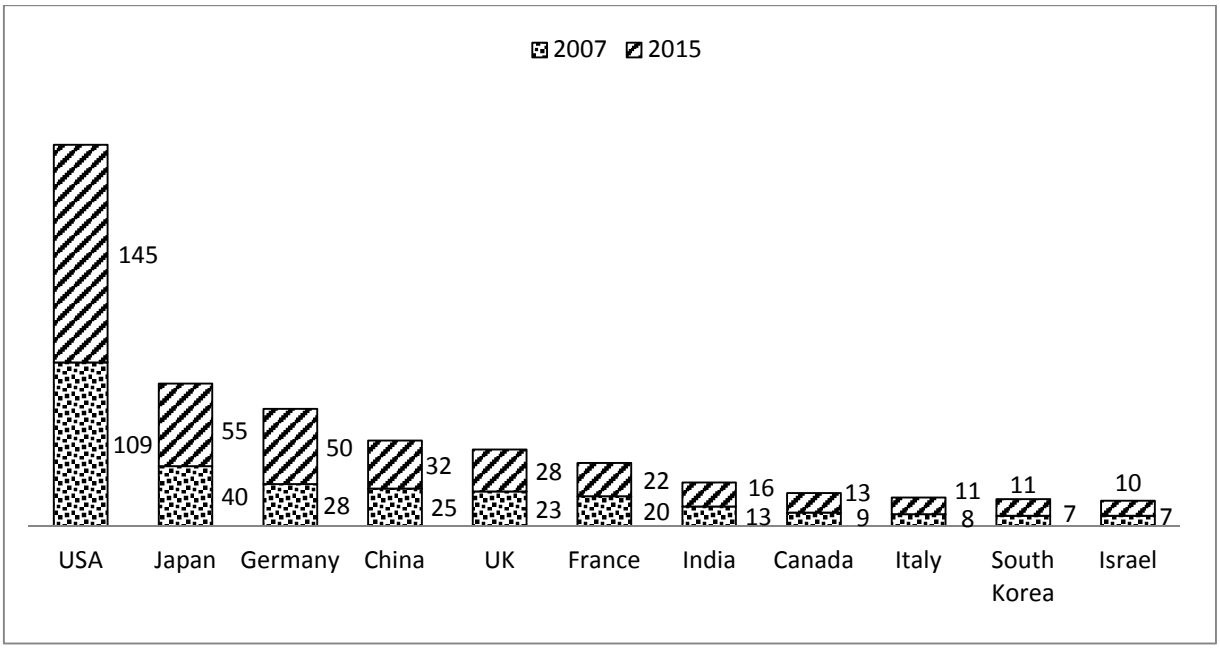


Fig. 2. The dynamics of the innovation costs, US $ billion

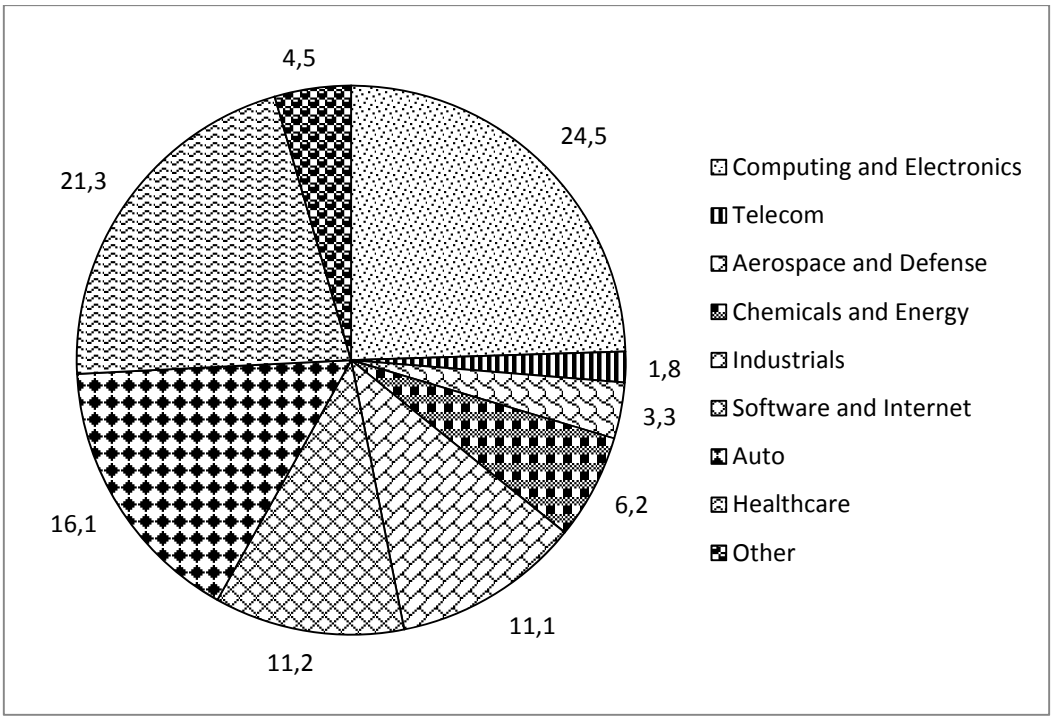


Fig. 3. Worldwide spending on innovation by industry, %

Currently, the Ministry of Industry and Trade is actively involved in developing of incentive schemes for import substitution industries. In this regard a number of measures of state support are being considered. June 16, 2014 the Ministry of Industry and Trade had prepared a law that drastically reduced government purchase of imported goods - "By 2017, 80% of the goods, which the government and state-owned companies buy, should be domestic" [7].

The major problem is the necessity of defining the import criteria. It should depend on the developing of new technologies. The national payment system, the national software platform, the national operating system should be created, as well as large state-owned investment and development bank should be established, which not only will give out loans at significantly below market rates, but also provide consulting support to borrowers on economic and technological development.

Greater attention should also be paid to an innovative policy of the state. After all, the innovative orientation allows accelerating the development of the state economy. Despite the fact that in recent years the investment process becomes slightly more active, there is a rather low level of innovative orientation. As confirmed by the World Bank's data according to which the index of development of innovative economy (knowledge economy) shows that Russia ranks 55th place out of 146 countries surveyed [8].

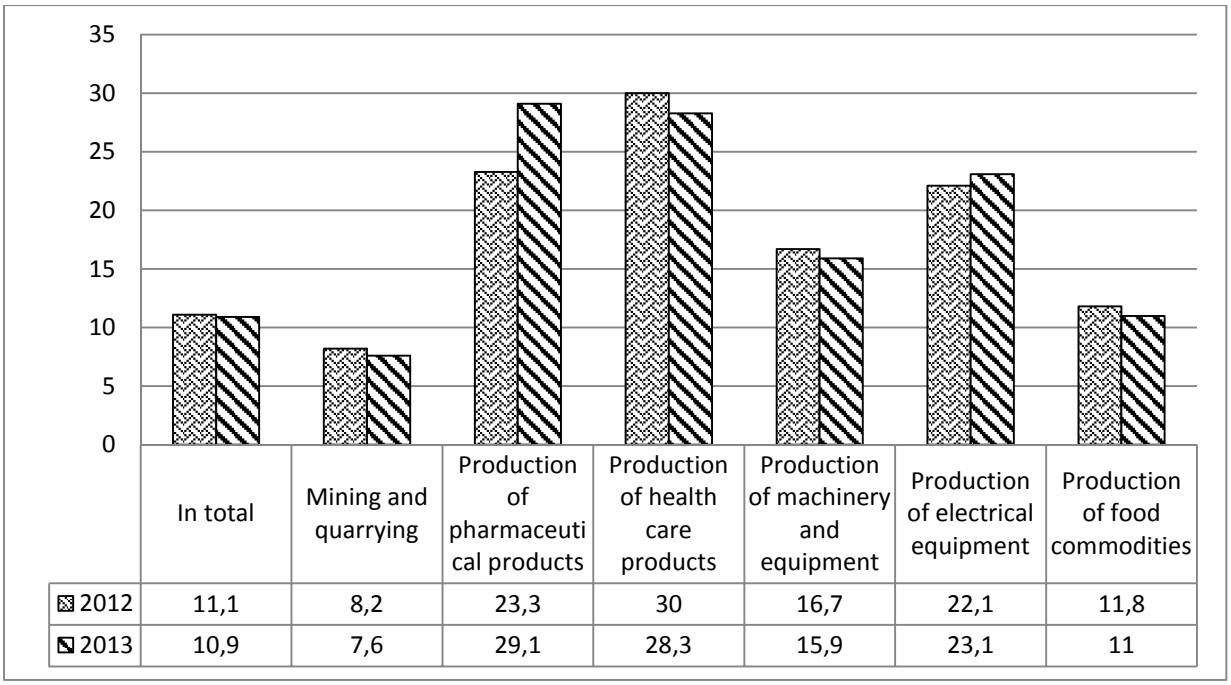
Figure 4 shows the rate of innovation activity in the most promising industries for import substitution. The dynamics of this indicator cannot be considered satisfactory – there wasn't any visible growth in virtually all sectors (except for the production of pharmaceutical products and electrical equipment).

New innovative technologies are to be mastered which is essential to provide competitive production/industry as the main condition for replacing imported goods and services with domestic and leading it out onto the global market.

Thus, state support of innovative business, research works and analyses can foster innovation. Within the framework of Federal Target Programs a number of colleges and scientific research institutes received fund for modernization of the main assets. However, this group of financial support mechanisms and stimulation of import substitution ought to be amplified with tools for investment efficacy assessment and expenditure control of public funds appropriated in the context of FTP.

At the same time one of the effective mechanisms of cooperation between state and regional authorities, research and educational structures, business are cluster forms of organization which enable to simultaneously create new working places, develop and produce competitive production, thereby solving the task of sustainable development of regions.

At present, according to data of the year 2014, on the territory of Russia there are located 200 development institutes, among which industrial and scientific techno parks prevail (figure 5) on which the development of cluster approach in state and regional economies is relied.



	In total	Mining and quarrying	Production of pharmaceutical products	Production of health care products	Production of machinery and equipment	Production of electrical equipment	Production of food commodities
2012	11,1	8,2	23,3	30	16,7	22,1	11,8
2013	10,9	7,6	29,1	28,3	15,9	23,1	11

Fig. 4. The total rate of innovation activity of organizations by economic activity, % [9]

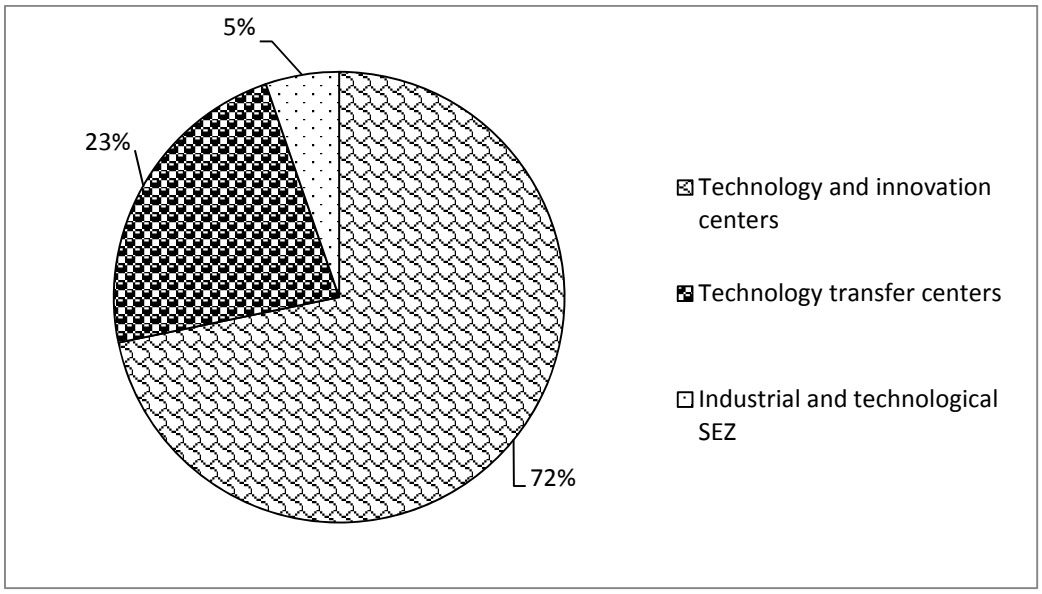


Fig. 5. Russian innovation infrastructure

From long-term initiatives of innovative cluster development and corresponding infrastructure the global federal project "Strategy of innovative development of Russian Federation for the period up to 2020" is realized. It is a multipronged program the aim of which is a "change-over of economy of Russia by the year 2020 into the innovative way of development". It requires 2 stages. During the 1st stage the creation of profitable and inviting conditions for accumulation of private sector investments is predicted; during the second stage – the increase of budget and private investments into the innovative domains, re-equipment of the main innovative centers, launching of new major projects in perspective areas. By the year 2020 it is planned to gain the same level of budget financing of innovative branches as in the countries of OECD and a share of innovative products in exported goods is to increase to 15% of the total number [15].

Moreover, one of the most important phases of the import substitution policy ought to be the development of support infrastructure of import substitution industries and rendering of information and consulting assistance of support for import substitution industries.

At this stage the law "On the industrial policy" was passed. One of its sections is dedicated to realization of state information system of industry the part of which has become "National center of import substitution support". Such center aims at solving the problem of informing and assisting import substitution in order to all domestic producers and suppliers of goods knew all potential customers and vice versa.

In every region it is necessary to set up such special-purpose informing centers of import substitution support, which will have at their disposal the database of producers and suppliers (information on technological organization profile) and customers with information on specification of ordered goods, terms of delivery and other commodity positions which are to be presented by both parties. In prospect expansion of function of this system concerning help to producers and suppliers of domestic goods, pursuit of winning orders, creation of business-plans, making technological, financial and economical expertise, profitable variants of financing are possible (figure 6)

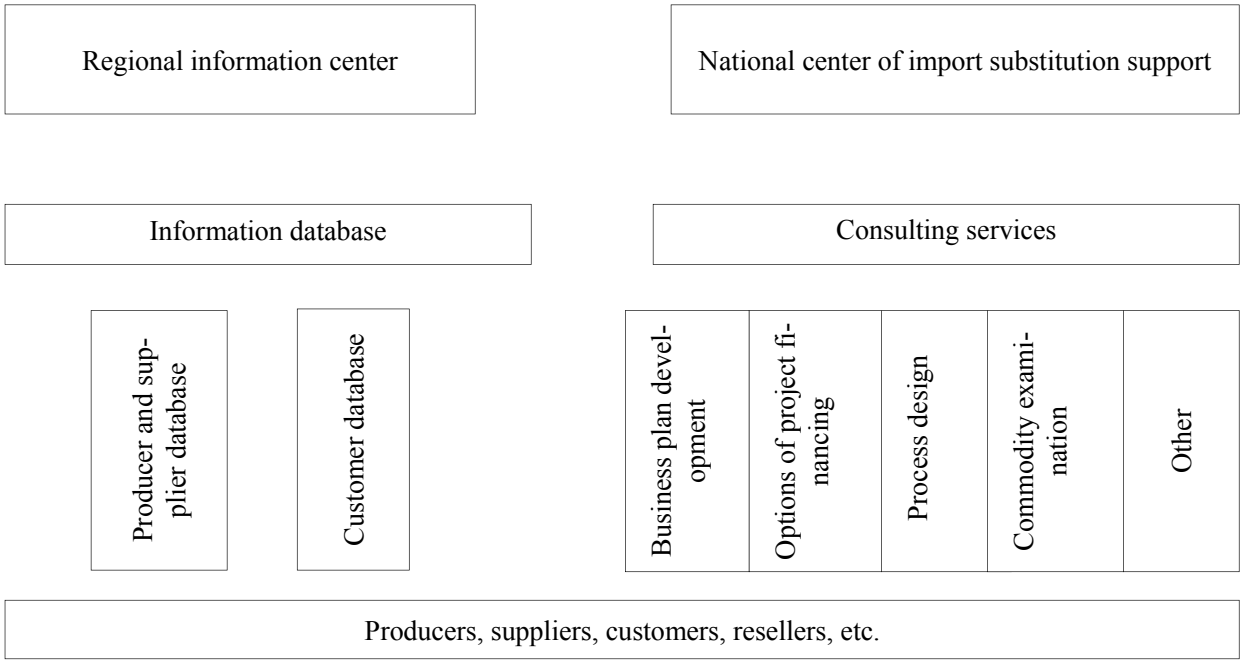


Fig. 6. The structure of the information support of import substitution

Thus, if we consider the import substitution not as a short-term action but as a long-term process the general purpose of which is to increase the competitiveness of local producers, promoting them as important players on the international markets, regions need to update and solve the problem associated with the development of its own scientific and technical potential of regions [16].

The policy of innovative import substitution involves the transition to the production of high-tech and science-intensive production by increasing the level of development of production, technology, education and training of citizens. The main focus should be on the organization of production of the products that is most in demand in Russia.

Successful solution of these tasks ought to be assisted with broader and more global attraction all the possible resources, involvement into the investment process not only budget but also non-budget sources. Significant role may play regional and local authorities taking part in renovation and development of corresponding industries on its territories which will enable to solve not only economical but social problems as well: raising of employment level of population, provision with goods of one's own making, income growth and living standard in general.

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Шабаліна Л. В., Караман Е. Г. Шляхи підвищення ефективності стратегії імпортозаміщення Російської Федерації

У статті проаналізовано динаміку та структуру імпорта Російської Федерації, у геополітичній ситуації, що склалася, Вивчено зарубіжний досвід та типи здійснення політики імпортозаміщення. Запропоновано рекомендації щодо підвищення інноваційної діяльності. Обґрунтовано створення національного центру підтримки імпортозаміщення.

Ключові слова: імпортозаміщення, інструменти імпортозаміщення, стратегія імпортозаміщення, продовольча безпека, інвестиційна політика держави, національний центр підтримки імпортозаміщення.

Шабалина Л. В., Караман Е. Г. Пути повышения эффективности стратегии импортозамещения Российской Федерации

В статье проанализирована динамика и структура импорта Российской Федерации в сложившейся геополитической ситуации. Изучен зарубежный опыт и типы осуществления политики импортозамещения. Предложены рекомендации по повышению инновационной деятельности. Обосновано создание национального центра поддержки импортазамещения.

Ключевые слова: импортозамещение, инструменты импортозамещения, стратегия импортозамещения, продовольственная безопасность, инвестиционная политика государства, национальный центр поддержки импортазамещения.

Shabalina L. V., Karaman E. G. The Ways of Improving the Efficiency of the Import Substitution Strategy of Russian Federation

The dynamics and structure of Russian Federation import in the current geopolitical situation were analyzed. The international experience and the types of import substitution policy were studied. Improvements and development of the innovative activity were proposed. The creation of national support center was grounded.

Keywords: import substitution, import substitution tools, import substitution strategy, food security, the investment policy of the state, national center of import substitution support.

Received by the editors: 02.11.2015
and final form 28.12.2015

UDC 373.5.091.313:36-051(430)

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SCHOOL SOCIAL EDUCATORS' GROUP WORK IN GERMANY

The statement of the problem. In Germany the second half of the XX century was marked out the switch of the state social policy and educational reforms. The permanent increase of socio-economic problems required from social specialists of the country to find the new ways of the decision of these questions, especially it concerned the most unprotected sections of the population such as children and the youth. That's why in Germany school social work has been developing actively since the end of the 1970s. The special role in the social educators' work plays the group work.

Analysis of basic researches and publications. A lot of German scholars devoted their researches to problems of using the group work both as the form and the method of school social work in different types of secondary educational establishments. They are M. Behnisch, J. Kalcher, W. Lotz, G. Meirhof, K. Mueller, H. Schiller, M. Schmidt-Grunert, K.-V. Schuetz, E. Stahl and others.

The aim of the article is to analyse the group work at German schools both as the form and as the method of social educators' work with children and the youth. Tasks of the research are: on the basis of learning of pedagogical and methodological publications to light up the features of the use of group forms and basic methods of social specialists' work in different types of secondary educational establishments in the FRG, to describe in details the usage of the project method in school social educator's group work.

The basic material of the research. Exposing the question of forms and methods of work of German school social educators it is necessary to emphasize that in most cases it is difficult to delimit them. So, the social work with a group or the group social work as well as the individual work in Germany is determined as the method of social work and as the form of social work, if the amount of objects takes up as a criterion. The group of clients is the object of social work [6].

Examining the group work as the form of social work at school, we are marked out that in Germany in July-August a school social teacher folds the curriculum of these forms of work on the school year. Usually he/she forms the list of different types of the group work. After that the social educator discusses it on the pedagogical conference with teachers and leaders of the school. We should pay attention, that among the offered forms and methods of the group work schoolchildren and their parents can also choose in most cases. After analysis and discussion the social specialists fold the adjusted plan of the group work with students. Analysing practical experience of social teachers in the different types of schools in Germany, we point out, that social specialists during their work combine groups in different way. A group can be:

– a separate class;
– a part of the class;
– a few girls or guys from one class or from a parallel;
– some small classes consisting of peers.

At primary school a school social educator often works with a certain class, having the aim to introduce children with each other, to unite the class, to acquaint pupils with standards of behaviour at school, to form unflagging rules of discipline during the lessons and breaks and others.

In order to reach the aim social specialists use in German schools continual trainings (from 2 days till 3 weeks). During this time pupils are free of lessons and they are occupied only with their school social educator.

During the whole school year the school social educator is using actively at primary school a lot of social games, elements of stage adaptation, excursions with pupils from different classes, he/she is taking part also in the preparation for school parties („Merry Christmas", „Mother's Day", „Happy Easter!", final summer parties and so on).

Taking into account peculiarities of German educational system it becomes understandable, that social educators in comprehensive, united and real schools at the fifth form come across the same problems as their colleagues at primary school. It means that children, who have just finished primary school, enter the most appropriate for them type of the secondary educational establishment. That's why at the beginning of the fifth form every child gets into the new environment of classmates.

In order to help the children from the fifth form to adapt better to a new school, school social educators are working with every class separately during the whole first week. In this case pupils don't have any lessons the whole week. School social educators hold social trainings, quizzes and different games. At the end of the first social week they organize a concert or a theatrical performance for parents and children because social specialists want to show what their pupils have reached.

The aim of all these forms and methods of the group work is to show children their new school and teachers, to bring the class together and also to pick out such children who are in need of special attention and supporting.

In Germany from the fifth form a lot of different teachers work with pupils, curriculum becomes harder, new subjects appear. That's why social educators in different types of school have no possibilities to hold long-term trainings. In this case school leaders include regular social lessons in the school timetable for those classes, which are in need of the constant work with social specialists. As a rule the supervising teacher of such class appeals with this request to the school head. These social lessons are compulsory for all pupils from this class.

At these social lessons different topics and problems are discussing (e.g. violence, mutual assistance, fighting superstitions and others); empathic skills are developing; social norms of conduct are studying (e.g. politeness, tactfulness, reliability) and also democratic liberties are speaking about (racial and religious tolerance, tolerant approach and so on) [5].

It is typical for social educators to use group work at different secondary educational establishments due to the sex of pupils, because children have reached the age of puberty. Social specialists want that children understand each other better, that's why they use the method "Girls' Day" and "Boys' Day". School social educators fix days in the timetable of group lessons, e.g. every Tuesday is girls' day, every Thursday is boys' day. During these days children change their social roles. Girls are playing football or basketball, discussing cars and models. Boys are embroidering, weaving, discussing fashion news and so on. On these days representatives of the opposite sex mustn't come to school social educators. The aim of such experiment is to show special features of both sexes from within.

Different group forms of social work are used also at vocational schools and gymnasia. School social educators make a tour of the city or in the country (e.g. a trip to Berlin, Stuttgart, Frankfurt-am-Main and others); visit museums, art galleries, exhibitions and so on. Social educators hold preventive trainings with senior pupils (topics are "Early sexual intercourse" or "Drugs and alcohol. Their harm for your health"), preventive programs "Teenagers to teenagers", youth "Internet-cafes".

The age of students, who study at vocational schools, is from 15 till 20 years, that's why the subject matter of preventive trainings and discussions are the same. But as a rule social educators add such topics as rapes, homosexuality, early abortions and so on. They often invite different specialists (doctors, policemen, psychologist) or show special films.

But the most widespread method, which school social educators use with groups of children in different kinds of schools, is the project method. Social educators use different projects. They can last only one lesson (e.g. the project "Friendship and Love" devoting to St. Valentine's Day); one day outside the school (e.g. climbing, canoeing, the project "Cooking" in the café or restaurant); a few days (e.g. the project "Lowering Thresholds" goes on 5 days) and long-term projects, e.g. "School without Violence".

When school social educators plan their new project first of all they point out a target group and the aim of this project. We can consider main features of projects in the project "Lowering Thresholds". It was worked out in 1997 and now school social educators from Friedrich Ebert School (Frankfurt-am-Main) use this project every year.

So, this project is for the 8-th formers. In 2012-2013 school year it was from 10/06/2013 till 14/06/2013. Students were from Friedrich Ebert School and United School Nordent (Frankfurt-am-Main). They cooperated with youth organizations in their district. These organizations have been united in the district committee for 25 years. There are 30 different establishments, agencies and centres. They work with pupils and the youth (e.g. the youth centre KUSS41, the centre for girls Mafald, the central children's library, the sixth police department, German organization for children's protection and so on).

The aim of this project is on the base of information about different youth organizations to give every child the feeling of protection and to prevent his/her isolation and moral failure [4].

The main tasks of the project are:

- to familiarize children with peculiarities of every organization;
- to show pupils forms and methods of work with the youth in practice;
- to give the opportunity for children to work with representatives of a certain centre on the spot;
- to extend the list of prepositions for social work with the youth;
- to improve the structure of organizations from the children's point of view;
- to set the teamwork of committees and children.

For realization of these tasks are assigned 5 days.

On the first day school social educators work with children at school. They give some information about suggestions and main tasks of all institutions in this part of the city. After that children analyze and discuss acute problems and interests of the youth.

Next day representatives of establishments and organizations come to school and hold so called "The Fair of Possibilities". They show short films or presentations about principles and methods of their work with children and the youth. After that pupils unite in groups of 3-4 people and choose 2-3 centres or establishments about which they want to know more. Among present organizations they can choose not only those, which give consultations, but also those centres, which are a nice place for spending their free time. When children have chosen the organization, work groups must coordinate with a hand-picked committee time and duration of their teamwork and prepare their list of questions.

On the 3d and 4th days of the project pupils attend their establishments. They can discuss their own problems, learn the idea, forms and methods of work of this organization, give their remarks or suggestions and so on. They must also prepare the presentation of their ex-

perience. Children may make their report as a presentation on computer, create a poster or prepare photos. Some schoolchildren represent their report as a role-playing game or verbal communication.

On the 5th day pupils show their projects for classmates. They can also invite their parents, relatives or friends. Children often invite the member of their organization. As a rule the presentations are bright and informative. The atmosphere is so friendly. Usually this project is realized very successfully.

Describing different forms of the group work and some methods of school social educators' work with children, we should remind, that the group work in Germany is carried out also as the method of social work. The main point of the group work is in the communication with other children, who have some general features or the same problems. In such group work the main way of influence is the group (2-10 people).

Doctor, professor of methodology of social work Michael Behnisch emphasizes in his researches that the group is used for solving problems, emotional supporting and developing of self-confident. At the same time in such groups can exist frustration and stress because of individual features of pupils (e.g. unsociability, needless, reticence) or casting, which is typical for every group [1].

We point out, that in Germany the method of group work has a long history. In the middle of 1950s in special social higher educational establishments in Western Germany were included the courses of studying this method. Gisela Konopka was the founder of group pedagogics.

Till the 1980s social group work with children inside and outside the school was topical. A lot of German famous scholars developed this problem. They were Karl Wolfgang Mueller, Heinrich Schiller, Klaus-Volker Schuetz and others. But then the method of social group work lost their popularity due to spreading the idea among German scholars, that children were not able to social work in groups [2].

But contemporary German scholars in the field of social group work (Juergen Kalcher, Walter Lotz, Gudrun Maierhof, Marianne Schmidt-Grunert, Eberhard Stahl) insist on the introduction of the method of social group work into functions of social specialists. They mark out that this method of school social work promotes individual and social maturing of a child, helps to develop pupils' skills of communication in society and build so called training ground for cooperation and socialization of schoolchildren outside their family [3].

Conclusions of this research and prospects of the further research in this direction. In conclusion we can say, that in the modern period of the development of school social work social educators often use group work both as the form and as the method of their work. It helps them to give more qualitative help and support for children and the youth.

To further researches it is necessary to take the analysis of main features of school social educators' work with parents and nerwork.

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Ковальова О. В., Гавриш О. Г. Групова робота соціальних педагогів у школах Німеччини

У статті проаналізовано групову роботу у школах Німеччини як форму та як метод діяльності соціальних педагогів з дітьми та учнівською молоддю. Автори також описують особливості використання групових форм та основних методів роботи фахівців соціальної сфери у різних типах середніх освітніх закладах ФРН. Особливу увагу у статті приділено розкриттю методу проектів.

Ключові слова: групова форма, груповий метод, метод проектів, шкільний соціальний педагог, діти.

Ковалева О. В., Гавриш Е. Г. Групповая работа социальных педагогов в школах Германии

В статье проанализирована групповая работа в школах Германии как форма и как метод деятельности социальных педагогов с детьми и молодежью. Авторы так же описывают особенности использования групповых форм и основных методов работы специалистов социальной сферы в разных типах средних образовательных учреждений ФРГ. Особенное внимание в статье уделено раскрытию метода проектов.

Ключевые слова: групповая форма, групповой метод, метод проектов, школьный социальный педагог, дети.

Kovalova O., Gavrysh O. School Social Educators' Group Work in Germany

In the article the group work at German schools as a form and as a method is carried out. The authors also marks out the peculiarities of using of group forms and main methods of social specialists' work at different kinds of middle schools in Germany. Special attention is paid in the article to the describing of project method.

Keywords: a group form, a group method, a project method, a school social educator, children.

Received by the editors: 09.11.2015
and final form 28.12.2015

UDC 338.47: 656.078.89:334.716

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COMPREHENSIVE MODERNIZATION OF RAILWAY TRANSPORT AS AN INNOVATIVE EFFICIENT INSTRUMENT TO RAISE COMPETITIVE CAPACITY OF A COMPANY

Problem definition. In the modern severe economic environment of the country, industrial development requires continuous raising of competitive capacity from companies and cutting of considerable expenses for transport services, therefore finding more efficient conditions of railway transport operation and cutting expenses for logistics is a relevant issue.

Analysis of the latest researches and publications. Theoretical and practical aspects of efficient operation of the railway field and railway transport are represented in works of many national and foreign scientists such as, M.M. Adzhavenko, M. Babel [4], Yu.S. Barash, V.P. Gudkov, V.L. Dikan, I.O. Zharska, N.F. Zenchuk, O.I. Zorin, D.M. Kozachenko, N.M. Kolesnikov, L.V. Kostyuchenko, M.V. Makarenko, Kh.V. Matvienko, A.A. Mikhalchenko, M.I. Mischenko, A.V. Momot, M.A. Oklander, O.V. Orlovska, T.V. Pepa, O.O. Petrenko, O.M. Polyakova, R.Sh. Rustamov, L.G. Chernyuk, E.N. Shirokova, and M. Shkoda [4].

The aim of the article is study of comprehensive modernization as the innovative efficient instrument to reduce transport costs under modern operation conditions of large industrial and transport companies.

The main part. Under conditions of globalization expansion only a market and a rate of return form competitiveness of each company, therefore increasing efficiency of its business operation is one of essential strategic targets of modern business development irrespectively of a sphere of introduction and a field of application. Thus, under conditions of increasing resource shortage, significant price fluctuations at world commodity markets, deepening of competitive struggle both at domestic and foreign markets, search of efficient solutions for further development along with maintaining of current market positions is becoming more and more important. Introduction of more variable engineering and information solutions allows to raise general competitive capacity of each company in the short term. These development trends are exclusive and intensive way to restore production which involve more efficient employment of resources without additional new factors of production.

Introduction of the viable solutions often requires large investments that is considered as an additional build-up devoid any economic sense under conditions of Ukrainian economy formation taking into account availability of considerable production facilities accumulated during the Soviet period, low labour costs. Only some companies build their own business on high-quality efficient bases creating modern production facilities and service centers. Moreover the national government has not yet found effective instruments to stimulate development of the national economy and effort directions to reach maximum synergy effect.

In the context of current high export orientation of Ukrainian economy in a segment of low value-added products, considerable dependence on import of energy resources it is search and introduction of efficient energy-saving technologies and development of domestic market of raw material resource consumption and processing along with build-up of export of more technological products that is becoming of high priority. Development of the domestic market is that driving force that will allow not only to increase a level of business activity at the macroeconomic level but to reach macroeconomic stabilization as well as balancing of state budget targets and reduction in unemployment level in the mid-term. Certainly, operation efficiency is impossible without introduction of a range of measures including of fiscal and budget nature, and without smooth operation of each element of the economic system.

Taking into account the selected topic, including logistics aspects of activity carried out by industrial companies and their associations, we will consider applied examples of increasing efficient of transport field operation as an element of the general economic system of the country. The transport field not only meets needs of the national economy in freight and passenger operations, and due to the advantageous geographic position it creates extra proceeds for the account of in-transit handling of freight. Thus, according to results of 2015 contribution of transport to the GDP of the country makes almost UAH 100 billion or 7.1% of its total amount [1].

Taking into account a raw material structure of Ukrainian economy and availability of prevailing products that are most often transported (iron ore, metal products, grain crops, construction materials), the largest share in the freight operation structure falls on railway transport (58.2% according to results of 2015 p. [2]). Besides, railway transport also plays one of the main service function for industrial companies – technological one, connecting transportation of raw materials, intermediate goods, and finished products among production departments into a single production complex. Thus, depending on a producibility level of finished products railway transport forms up to 30% of their value and correspondingly effects competitiveness level of not only manufactured products but fields in general, especially during a period of adverse market conditions at world raw material markets. It is the subject of authors' research – as a promising sector of increasing efficiency of business entities.

Railway transport represents a separate production and technological complex that includes in less detail:

- infrastructure (railway tracks and located on them engineering structures, transmitting equipment that are used to ensure transportation process);
- rolling stock (traction equipment and car fleet);
- loading/unloading points (handling equipment).

Without taking into consideration support railway transport and quiet large fleet of private cars, in the transport field a prevailing form of ownership is state form represented by Ukrzaliznytsia PJSC (100% of shares are owned by the state [3]), which is a monopolist at the railway transportation market.

Valid legislation sets almost exclusive right to freight transportation only by traction equipment of Ukrzaliznytsia PJSC, not admitting private companies to railway transportation. However current physical state of the traction equipment does not allow to meet needs in railway freight transportation even under conditions of significant reduction in transportation volume observed during 2014 – 2015 (see Fig. 1).

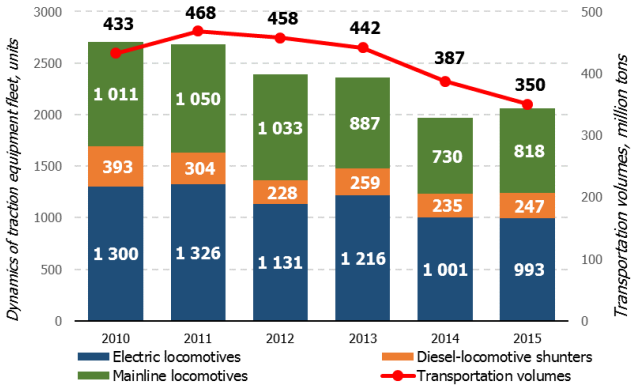

Fig. 1. Dynamics of traction equipment fleet owed by Ukrzaliznytsia PJSC and transportation volumes in 2010 – 2015 [2]

Analysis of dynamics of traction equipment fleet indicated in Fig. 1 shows that in 2010-2015 reduction in operating fleet of mainline locomotives and traction equipment makes almost 27%, however transportation volumes decreased only by 20%, that, in authors' opinion, is connected with general reduction in a freight base due to deterioration of economic situation in the country and aggravation of crisis phenomena in the world economy.

The authors illustrated a structure and quantity of inventory stock of traction equipment owned by Ukrzaliznytsia PJSC as of 01.07.2015 (see Table 1).

Table 1

Inventory stock of traction equipment owned by Ukrzaliznytsia PJSC as of 01.07.2015

(units)	All	park that is used			park that is not used
		working park	reserve	repair	
INVENTORY STOCK	**3 872**	**2 058**	**588**	**562**	**664**
Diesel locomotives	**2 152**	**1 065**	**309**	**281**	**497**
mainline locomotives	719	247	93	118	261
mainline freight locomotives	*648*	*н.д.*	*н.д.*	*н.д.*	*н.д.*
Mainline passenger locomotives	*71*	*н.д.*	*н.д.*	*н.д.*	*н.д.*
diesel-locomotive shunters	1 433	818	216	163	236
Electric locomotives	**1 720**	**993**	**279**	**281**	**167**
freight	1 191	н.д.	н.д.	н.д.	н.д.
direct-current locomotives	*676*	*н.д.*	*н.д.*	*н.д.*	*н.д.*
alternating-current locomotives	*515*	*н.д.*	*н.д.*	*н.д.*	*н.д.*
passenger	479	н.д.	н.д.	н.д.	н.д.
direct-current locomotives	*250*	*н.д.*	*н.д.*	*н.д.*	*н.д.*
alternating-current locomotives	*229*	*н.д.*	*н.д.*	*н.д.*	*н.д.*
double-current	50	н.д.	н.д.	н.д.	н.д.

Analysis of inventory stock of traction equipment by operating life illustrates wear out of all types of locomotives, namely: a number of locomotives with operating life exceeding 30 years makes over 84% and is 3236 out of 3872 locomotives being on the balance sheet of the company. In authors' opinion, this fact is connected with insufficient level of traction equipment renewal and actual performing of 'state' functions by Ukrzaliznytsia PJSC in financing of losses from passenger transportation for the account of freight transportation.

The issue of traction equipment renewal along with rehabilitation of infrastructure is one of long-term priority tasks of Ukrzaliznytsia PJSC that is proved by an investment plan of the company for 2016 – 2018 approved by the Ministry of Infrastructure of Ukraine in February 2016. It is planned to allocate over UAH 5.2 billion for renewal of the traction equipment during this period.

The most urgent issue, that demands solution and developed at the moment both by management of Ukrzaliznytsia PJSC and a private sector, is to select an optimum alternative of traction equipment renewal that can include the following alternatives: complete overhauling with extension of useful life, modernization or purchase of new equipment. Advantages and disadvantages of each of the offered alternatives are stated in Fig. 2.

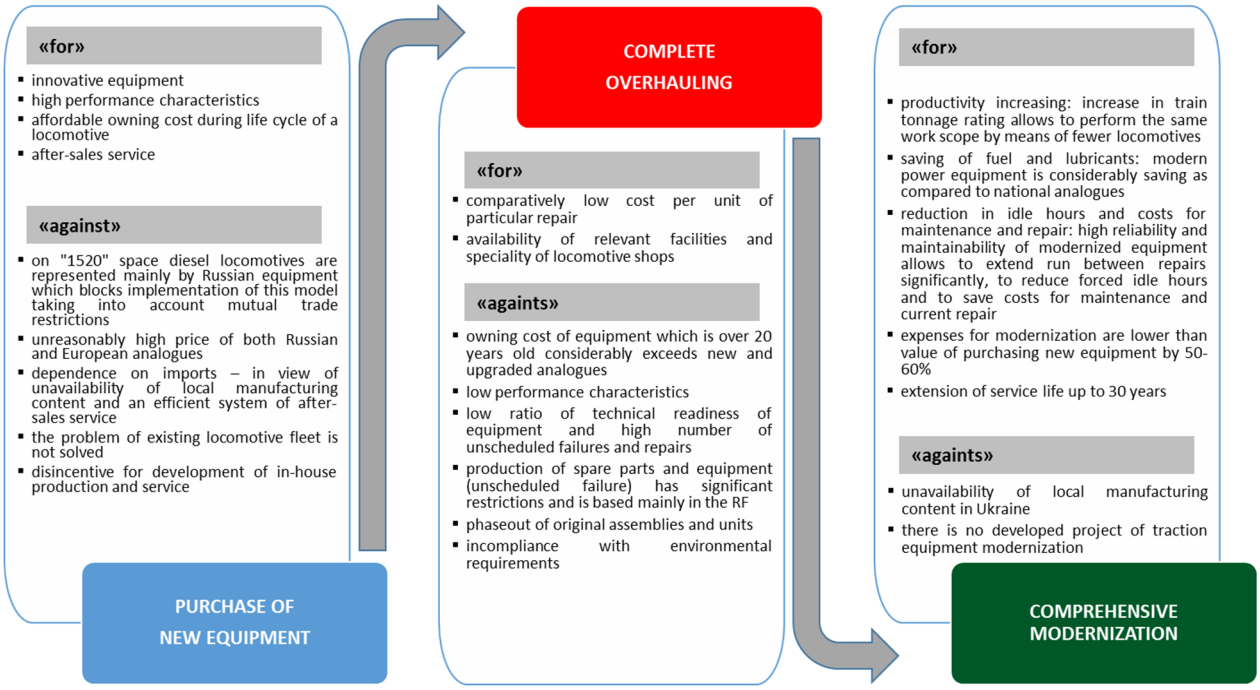

Fig. 2. Disadvantages and advantages of alternatives considered for traction equipment modernization (the authors' creation)

Essence of comprehensive modernization is in radical technical modernization of equipment: only an underframe and a main frame are left from an old locomotive and the rest assemblies and units are substituted for new – that means that basing on the existing main frame a new locomotive is built. According to experts of the transport field, value of the mentioned modernization makes Euro 900 thous. to Euro 1,800 thous.

Thus, despite of considerable accumulated experience in complete overhauling and its relatively low value, further development of this approach to renewal of traction equipment is unpromising. In authors' opinion, analyzing efficiency of using transport it is necessary to put in the forefront such economic index as 'life cycle cost' of a particular unit of equipment that covers the whole scope of costs: capital expenditures to maintenance costs. The stated point of view is economically grounded by experience of Polish company, Cargo (Polish Railways) [4, p. 13].

The authors have formed disadvantages and advantages of existing alternatives of traction equipment renewal (see Fig. 2) where the alternative of comprehensive modernization is the most promising. Productivity increasing, saving of fuel and lubricants, reduction of idle hours and costs for maintenance and repairs, lower value as compared to purchase of new equipment and extension of service life up to 30 years are referred to positive economic changes in this alternative.

The research of applied aspects of each specified alternative considered for modernization of traction equipment in view of life cycle of locomotives allowed to develop the following diagram (see Fig. 3) which also proves perspective and accordingly efficiency of modernization both in medium and long term. In addition, depending on loading and intensity of locomotive use

costs for its modernization are repaid in 3-5 years. It should be noted that the specified development model showed itself in Baltic, European countries, and the RF as the most progressive and efficient scenario of traction equipment renewal.

According to the authors, analysis of life cycle cost of locomotives based on gained experience in operation of traction equipment after modernization (see Fig. 3) proves efficiency of this model versus other alternatives – complete overhauling and purchase of new equipment. Reduction in operational costs and increase in technical readiness of equipment along with decrease of unscheduled failures allows to return investments in locomotive modernization in 3-5 years depending on intensity of loading operations and locomotive load.

Therefore, comprehensive modernization is the efficient instrument used to reduce operational costs and accordingly costs of railway transportation.

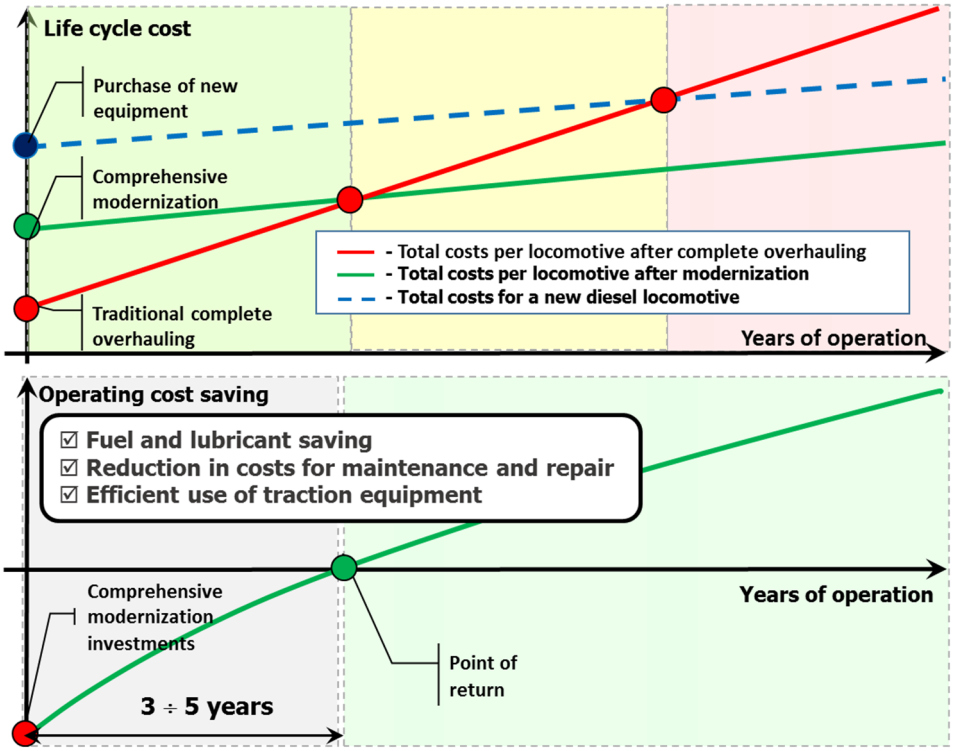

Fig. 3. Life cycle cost of a locomotive and return on investment in its modernization (summarized by the authors basing on [5])

Conclusions. It has been found that existing fleet of traction equipment owned by both state and private companies is significantly worn out – average age makes over 30 years.

The analysis showed that obsolescence of traction equipment along with physical ageing does not allow to ensure even 70% of performance characteristics existing at the market of new and upgraded equipment analogues.

It has been proved that a model of locomotive operation generally accepted in Ukraine lies in 'operation to failure'. Technical condition of rolling stock does not allow to increase productivity of the fleet without involvement of additional units of equipment that requires additional solid investments.

It is found that along with shortage of traction equipment on some transportation routes it is quiet difficult to assess capacity of repair service market in view of availability of considerable excess power and reserves due to decrease in volumes of production and transportation accordingly – operating fleet makes less 50% of inventory stock.

It has been substantiated that over 30% of traction equipment reached age limits and is subject to disposal through impossibility to extend its service life by means of complete overhauling. In this case modernization is a solution that will allow to effect the desired result with extension of locomotive service life for up to 30 years.

It has been analyzed that experience of Poland, Baltic countries, and the RF shows ability of the model of traction equipment modernization not only in view of performance characteristics, but also in view of life cycle cost of locomotives – modernization is the most efficient scenario of traction equipment renewal with return in 5 years maximum.

Basing on analysis of technical and economic indices of railway transport renewal, it has been established disadvantages and opportunities of different alternatives considered for renewal of traction equipment (purchase of new equipment, complete overhauling, comprehensive modernization) among which comprehensive modernization is the most economically sound and efficient.

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Логутова Т. Г. Полторацький М. М. Комплексна модернізація залізничного транспорту як ефективний економічний інноваційний інструмент підвищення конкурентоспроможності підприємства

В статті розглянуто теоретичні та практичні аспекти оновлення основних засобів залізничного транспорту промислових і транспортних підприємств, що дозволить підвищити конкурентоспроможність підприємств за рахунок зниження вартості готової продукції. Обґрунтовано перелік переваг при виборі комплексної модернізації, як дієвого інструменту підвищення ефективності функціонування залізничного транспорту промислових і транспортних підприємств.

Ключові слова: транспортна галузь, інноваційний інструмент, промислове підприємство, комплексна модернізація, вартість життєвого циклу.

Логутова Т. Г., Полторацкий Н. М. Комплексная модернизация железнодорожного транспорта как эффективный экономический инновационный инструмент повышения конкурентоспособности предприятия

В статье рассмотрены теоретические и практические аспекты обновления основных средств железнодорожного транспорта промышленных и транспортных предприятий, которые позволят повысить конкурентоспособность предприятий за счет снижения стоимости готовой продукции. Обоснован перечень преимуществ при выборе комплексной модернизации, как действенного инструмента повышения эффективности функционирования железнодорожного транспорта промышленных и транспортных предприятий.

Ключевые слова: транспортная отрасль, инновационный инструмент, промышленное предприятие, комплексная модернизация, стоимость жизненного цикла товара.

Logutova T., Poltoratskyi M. Comprehensive Modernization of Railway Transport as an Innovative Efficient Instrument to Raise Competitive Capacity of a Company

The article considers theoretical and practical aspects of modernization of railway transport owned by industrial and transport companies that will allow to raise competitive capacity of the companies due to decrease in value of finished products. It is substantiated a list of advantages when choosing comprehensive modernization as the efficient instrument to raise benefits from railway transport operation by industrial and transport companies.

Keywords: transport industry, innovative instrument, industrial enterprise, complex modernization, cost of life cycle.

Received by the editors: 25.11.2015
and final form 28.12.2015

Finance

UDC 369.01

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CONCEPTION OF THE PRESENT-DAY PENSION SYSTEM AS A RESULT OF TRANSFORMATION PROCESSES IN GLOBAL DETERMINATION

One of the central problems of social development is living standards. Social welfare state can be considered as the most perfect form for manifestation of social basis in social relations. Many of developed countries have already come to the level corresponding to qualitative characteristics of social state, provisions of which are also the example for forming conceptions of development of many countries. Principle of social welfare state fixed in the Constitution of Ukraine means also forming of adequate social standards for all categories of population [1]. And the problems related to moneyed assistance (material support) of the aged obtain large significance in society. Anyhow, solution of these problems does falls within the scope of the basic interests of every person.

However, the present-day stage of development has also defined a number of global problems generated by socialization of society. Gradual shift in priorities of development towards satisfaction of human wants and active promotion of their growth take place. As a result, social structure is involved in gradual transformation into consumer society when satisfaction of needs takes place without any limitations. In this case problems of valuation of environment, renewability of consumed environmental resources and ecology go by the wayside. Under such conditions pension system has not only to provide financial assistance and adequate level of consumption for senior citizens but also to fulfill active function in economic development without burdening of economy with grand-scale expenses and slowing down economic development. It is assumed that mixed pension scheme architecture satisfies these requirements best of all. It is based on insurance principles and diversified approach to the formation of retirement assets. Their basic provisions are implemented by means of joint and defined contribution systems of obligatory retirement insurance and non-state pension provision (non-contributory pension scheme) [2, 3]. Insurance principles are the means to relate rate of retirement pension to pensionable service duration, wage level (earnings) and insurance fees. It is assumed that insurance principles for forming retirement assets can also inspire all participants of pension relations to active participation in retirement insurance. And possibility of accumulating pension plan assets and converting them into investment resources is considered as substantial potential for development of economy and increase in its efficiency. However, new concept of pension relations embedded into domestic environment can be effective only provided its harmonization with specific social-economic conditions in the country. We must just note that practice of functioning of three-pillar pension system does not always justify optimistic forecast. For example, there are relatively low rate of retirement pension within pay-as-you-go pension scheme; non-state pension system is small scale; and for defined contribution pension system to be put into action during existence of combined pension system in 2004 necessary conditions have not been created. An additional point to emphasize is that nowadays against the background of fast moving globalization there is aggravation of economic and financial problems taking the form of global structural disbalances. This makes forecasting of financial-economic processes for long-term perspective (required by the provisions of present-day forms of retirement insurance) problem-plagued.

Research into different aspects of pension system functioning has found its way in the works of many scholars and practitioners, among whom are N. Yu. Borisenko, H. G. Nikitenko, O. G. Bilorus, O. V. Gavrilyuk, S. A. Rybak, V. S. Lukyanov and many others. However, state of the art of the national retirement insurance is bombarded by continuing transformation processes in economy, financial, political and other systems of global space. This results in the necessity for it to be studied in more detail and proves it topicality.

Thus, object of the paper is analysis of some aspects related to functioning of the national system of retirement insurance in the context of the processes of global social transformations, identification of issues of concern and determination of the lines to improve the conception of pension system in the process of social-economic development of society.

Our research is based on a system approach using general scientific methods: generalization, pooling, analysis and synthesis. We used abstract-logical method for making conclusions.

Transformation of the national pension system (retirement plans) is component part of the national transformations. However, under the conditions of global

trends in social development the process of pension adjustment is beyond the scope of separate state. Thus, pension transformations can be considered to be the result of world-wide (global) transformations. It is significant that pension relations influenced by globalization acquire peculiarities inherent to it. Specifically, globalization is understood as gradual transformation of global space into a single zone where capital, commodities and services migrate easily, as well as ideas are disseminated and their carriers move freely stimulating development of modern institutions and smoothing mechanisms of their interaction [4, p. 6]. Thus, interconnection of information space not only makes information on economic, social and cultural life of the nation accessible. Common positions, objectives and criteria of economic development, quality of life and social standards are being formed in global space. We are of the opinion that pension system category in the context of globalization can be represented as a system of social relations through which moneyed assistance of pensioners is carried out that reflects social regulations of pension provision on the national level by means of pension payment rates and indicators of social guarantees.

One of the main criteria of multinational evaluation of pension domain is the ratio of pension expenses within the state to the volume of gross domestic product (GDP). Index of the ratio of pension expenses to the volume of GDP is shown in Table 1.

Table 1

Pension expenses as a percentage to GDP

Country	2000	2010	2020	2030	2040	2050
Ukraine	8.7	16.3	15.2	18.8	20.9	24.2
Germany	8.8	10.2	10.5	11.5	12.1	12.3
France	10.5	13.5	13.6	14.2	14.4	14.2
Great Britain	5.5	6.7	6.9	7.6	8.0	8.1
USA	5.1	4.9	5.3	6.0	6.0	5.7
The Netherlands	5.3	6.5	7.8	9.3	10.3	10.3
Denmark	7.1	9.4	10.6	10.6	10.4	9.6
Russia	4.7	9.4	10.8	14.0	15.4	18.8
Poland	8,5	10,8	9,7	9,4	9,2	9,1

Source: USAID documents [5].

What stands out is the tendency to fast moving growth of this index in Ukraine. In analytical report *Risks, threats, priorities and consequences of reformation of pension system in Ukraine* it is observed that in the absence of reforms by 2050 this index will be the highest [6, p. 21]. It is significant that the given ratio does not characterize qualitative aspect of constituent indices. However, the level of pension maintenance remains relatively low. Index of GDP in this ratio characterizes economic capabilities of the state to defend social sphere. Without analysis of the completeness of formation and structure it is neither illustrative of the economic strength of the state. Shadow economy (informal sector), not reflected in official statistics, is class of its own challenges in international practice of GDP analysis. Consequently, society obtains distorted interpretations of qualitative characteristics of economic and social spheres. Therefore we deem it advisable use of methodology of GDP formation with obligatory account of shadow economy volumes. This circumstance must be embodied in formation of the methodology for social indicators, where GDP index is used.

It is assumed that development of pension systems deals with demographic problems almost in all countries of the world. Arguably, population profile is one of the driving forces of social-economic development. Aging of population has influence with conceptualization of pension systems as a result of different circumstances. Resiliency of pension system especially depends of the capability to provide financial support to growing number of pensioners. Ratio percentage of senior citizens in the overall structure of population is shown in Table 2.

Table 2

Ratio percentage of senior citizens in the overall structure of population

	Share of persons aged older than 60			Share of persons aged older than 65		
	2020	2030	2050	2020	2030	2050
Europe	25.6	29.3	34.2	19.0	22.6	27.4
Eastern Europe	23.5	26.0	33.6	16.6	20.1	25.4
Western Europe	28.3	33.1	35.2	21.5	25.8	28.9
Northern Europe	24.6	27.4	29.5	18.7	21.2	23.5
Southern Europe	26.6	31.5	37.5	20.3	24.0	31.4

Source: World Population Prospects [7]

Researchers noted that Europe is the largest region with the highest ratio percentage of senior citizens older than 65. The structure of senior citizens is 21.0 % of persons of the age of 60, and a share of persons older than

65 is 16.0 %. According to the forecasts, this indicator will rise in the long view, especially in countries of Northern and Eastern Europe [8, p. 26]. Therefore social policy of European and a number of other countries is focused on minimization of negative consequences against risks of aging of population. It must be said that this tendency is typical also for other regions of the world. According to N. Yu. Borisenko, formation of the ideology of present-day pension system must be based on the objective assessment of demographic situation. This is because practically all demographic indicators related to the problems of pension maintenance are budget-forming [9, p. 109]. Predominance of one or another demographic group in the structure of population defines flows of funds of budget revenue and spending of the corresponding pension fund. Basic demographic and other statistics is shown in Table 3.

Table 3

Demographic and other statistics related to social security, 2012

Country	Total population, mln	Percentage, 65 or older	Dependency ratio (a)	Life expectancy at birth (years)		Life expectancy age		Early pensionable age		GDP per capita (US$)
				men	women	men	women	men	women	
Albania	3.2	9.7	47.8	74.2	80.4	65	60	62	57	8.716
Andorra	0.09	13.0	40.0	80.4	84.7	65	65	c	c	37.200
Austria	8.4	17.6	47.8	78.4	83.6	65	60	63.5	58.5	38.818
Belarus	9.6	13.6	40.0	65.2	76.4	60	55	c	c	13.040
Belgium	10.7	17.4	52.2	77.2	82.8	65	65	60	60	36.313
Bulgaria	7.5	17.5	45.4	70.3	77.1	63.33	60.33	c	c	13.870
Croatia	4.4	17.2	47.5	73.3	80.4	65	60.25	60	55.5	19.986
Cyprus	1.10	11.6	41.5	77.7	82.1	65	65	63	63	30.848
Czech Republic	10.5	14.8	40.6	74.7	81.0	62.5	61.33	59.5	58.33	25.581
Denmark	5.6	16.5	52.6	76.7	81.4	65	65	c	c	37.720
Estonia	1.3	17.2	48.3	69.8	80.0	63	61	60	58	19.693
Finland	5.4	17.2	51.0	77.2	83.3	65	65	62	62	35.265
France	62.8	16.8	54.2	78.5	84.9	60	60	c	c	33.674
Germany	82.3	20.4	51.2	78.2	83.0	65.08	65.08	63	63	36.338
Greece	11.4	18.6	49.5	77.6	82.6	65	62	60	57	29.617
Guernsey	0.65	17.1	47.1	79.6	85.0	65	65	c	c	44.600d
Hungary	10.0	16.5	45.3	70.8	78.5	62.5	62.5	c	c	20.312
Iceland	0.32	12.0	48.8	80.3	83.8	67	67	65	65	36.795
Ireland	4.5	11.7	49.0	78.4	83.2	65	65	c	c	40.697
Isle of Man	0.85	18.2	53.3	79.2	82.5	65	60	c	c	35.000d
Italy	60.6	20.4	52.5	79.2	84.6	66	62	c	c	32.430
Jersey	0.95	14.8	45.6	79.1	84.0	65	65	63	63	57.000
Latvia	2.3	17.8	46.3	68.8	78.5	62	62	60	60	16.437
Liechtenstein	0.37	15.0	45.0	79.4	84.2	64	64	60	60	141.100
Lithuania	3.3	16.1	44.8	67.2	78.3	62.5	60	57.5	55	17.308
Luxembourg	0.51	13.9	46.4	77.6	82.7	65	65	60	60	83.820
Malta	0.42	14.1	40.9	77.6	82.3	61	60	c	c	24.814
Moldova	3.6	11.2	38.5	66.2	73.5	62	57	c	c	2.854
Monaco	0.03	26.9	64.5	85.7	93.8	65	65	60	60	63.400
Netherlands	16.6	15.3	49.3	78.9	82.8	65	65	c	c	40.676
Norway	4.9	14.7	50.2	79.1	83.5	67	67	c	c	56.214
Poland	38.3	13.6	39.7	72.2	80.6	65	60	c	c	18.905
Portugal	10.7	17.9	49.4	76.8	82.8	65	65	55	55	24.920
Romania	21.5	14.9	43.1	70.6	78.0	64.25	59.25	59.25	54.25	14.278
Russia	143.0	12.8	38.6	63.3	75.0	60	55	c	c	18.932
San Marino	0.03	18.0	52.9	80.6	85.8	65	65	60	60	36.200
Serbia	9.9	14.3	47.0	72.5	77.1	65	60	53.67	53	11.893
Slovak Republic	5.5	12.1	37.4	71.9	79.5	62	59.75	60	60	22.882
Slovenia	2.0	16.5	43.6	76.1	82.8	63	61	c	c	27.133
Spain	46.1	17.0	46.9	78.8	84.8	65	65	c	c	32.150
Sweden	9.4	18.2	53.3	79.7	83.7	65	65	61	61	37.377
Switzerland	7.7	16.7	46.9	80.2	84.7	65	64	c	c	45.224
Turkey	72.8	6.0	47.9	72.0	76.6	60	58	c	c	13.668
Ukraine	45.4	15.5	42.2	63.5	74.6	60	55.5	c	c	6318
United Kingdom	62.0	16.6	51.4	78.3	82.4	65	61	c	c	35.155

Source: Pension Markets in Focus [8]

GDP – Gross Domestic Product

a. Population aged 14 or younger plus population aged 65 or older, divided by population aged 15-64.
b. General early pensionable age only; excludes early pensionable ages for specific groups of employees.
c. The country has no early pensionable age, has one only for specific groups, or information is not available.
d. Data dates from 2005 or earlier.

It is important to emphasize that the highest indices for older persons in the overall structure fall on the largest economies: Monaco, Germany, Italy, Sweden, Austria and Belgium. The biggest life expectancy is typical for most of these countries. For respective pension systems prolongation of retirement period in the persons' life assumes additional expenses of financial resources. Also worth noting is that the above mentioned and a number of other developed countries differ also in high GDP indices per a person. This means availability of potential financial possibilities for functioning of pension systems even under conditions of increasing population pressure. Together with adverse demographic determinants (as it appears from Table 3), GDP volume per a person in Ukraine is also the lowest among the countries under consideration. Under such conditions solution of the problems of social welfare is particularly troubled and requires activation in economy. The idea is that qualitative social security is possible provided achievement of definite level of economy and increase in the volumes of government receipts (public revenues). However, according to S. O. Rybak, countries with low level of revenues, expanded poverty and considerable part of illegal sector of economy require more increase in the amount of social security than others [10, p. 17]. The author's argument is that social insurance in developing countries has to be not only financially accessible but can also serve as a necessary factor for long-term and stable growth [10, p. 17]. Researchers more than ever agree that present day welfare system must execute stimulant and not compensatory function, which is more typical for American model. This model is focused on securing social protection of only those categories of people who are deprived of any other sources of income except welfare payments. However, conditions for high living standards are created. Social welfare model employed in Scandinavian countries can be called most socially-oriented. High standard of social welfare here is considered as right at law and is provided mainly as state funds (budgetary financing) [10, p. 18]. German (continental) model differs in large volume of GDP redistributed for social goals and developed system of welfare [10, p. 18]. The outstanding feature of this model is synergies between duration of participation and level of social welfare. Compared to said system Anglo Saxon model provides powerful capabilities of pension fund scheme (pension maintenance) with or without participation of a person in it on the grounds of principles of solidarity. We understand that enumerated models are inherent to economically developed countries, where ideology for constructing social welfare systems is based on achievement of high living standard, including that of pensioners. At the same time accelerated transformations in economy and financial sphere stimulate development of new forms and methods for solution of social problems. For this purpose formation of the ideology of pension transformations assumes also account of peculiarities of social development, the achieved level of its socialization, quality of social policy being carried out, availability of insurance traditions as well as attitude of community to age and many others. This is accounted for variety of social and pension plans. It is important to emphasize that practically all available forms of social assistance are represented in the national social protection system as well as throughout European space. In Ukraine national model of pension system has been formed on the grounds of appraised foreign conceptions. However, unique characteristic of the national forms of social insurance, especially of retirement pension insurance, is focus on poverty minimization and securing the adequate level for satisfaction of social needs. Recently the quality of social protection is increasingly connected with the volume of financial resources accumulated as part of specific type of social (retirement) insurance. The main sources of financial resources of pension plans are insurance contributions paid by insured and insured persons at the fixed rates. Issues related to the rates of social contributions and distributions of fiscal burden among payers are the most polemical in academic and practical environment. Most of Ukrainian scholars hold the view that there is interdependence of increase in pension system financial resources on the conditions related to the decrease in the rates of insurance payments. The main contributions rates fixed in the European countries are shown in Table 4.

Table 4

Contributions rates for social security programs, 2012 (in percent)

Country	Old age, disability, and survivors			All social security programs [a]		
	Insured person	Employer	Total	Insured person	Employer	Total
1	2	3	4	5	6	7
Albania [b]	8.8	12.8	21.6 [c]	11.2	16.7	27.9 [d]
Andorra	5.5	14.5 [c]	20 [c]	5.5	14.5	20
Austria [b]	10.25	12.55	22.8	17.2	15.15	42.35
Belarus	1	28	29	1	34.3	35.3
Belgium [b]	7.5	8.86	16.36	13.07	24.8	37.87
Bulgaria [b]	7.9	9.9	17.8	12.9	17.8	30.7 [d]

Ending of Table 4

1	2	3	4	5	6	7
Croatia [b]	20 [c]	0	20 [c]	20	17.2	37.2 [d]
Cyprus [b]	6.8 [c]	6.8 [c]	13.6 [c]	6.8	6.8	13.6 [d]
Czech Republic [b]	6.5	21.5	28	11	34 [e]	45 [de]
Denmark	f	f	f	8	8	16 [df]
Estonia	2	20	22	4.8	34.4	39.2 [d]
Finland	5.15	17.65	22.8	7.99	22.39	30.38 [d]
France [b]	6.75 [g]	9.9 [g]	16.65 [g]	9.9	32.68 [e]	42.58 [e]
Germany [b]	9.8	9.8	19.6	20.425	20.845	41.27 [d]
Greece [b]	6.67	13.33	20	12.05	22.6	34.65
Guernsey [b]	6 [c]	6.5 [c]	12.5 [c]	6	6.5	12.5 [d]
Hungary [b]	10 [c]	27 [c]	37 [c]	17.5	27 [h]	44.5 [dh]
Iceland	4	15.79 [c]	19.79 [c]	4	15.79	19.79 [d]
Ireland	4 [c]	4.25 [c]	8.25 [c]	4	4.25	8.25 [i]
Isle of Man	11 [c]	12.8 [c]	23.8 [c]	11	12.8	23.8 [d]
Italy [b]	9.19	23.81	33	9.19	31.78	40.97
Jersey [b]	5.2 [c]	5.3 [c]	10.5 [c]	6	6.5	12.5 [dj]
Latvia	11 [c]	24.09 [c]	35.09 [c]	11	24.09	35.09 [d]
Liechtenstein [b]	10.55	12.75	23.3	12.55	19.7 [e]	32.25 [e]
Lithuania	3	23.3	26.3	9	30.98	39.98 [d]
Luxembourg [b]	8	8	16	12.45	12.2	24.55 [d]
Malta [b]	10 [c]	10 [c]	20 [c]	10	10	20
Moldova [b]	6 [c]	23 [c]	29 [c]	6	23	29
Monaco [b]	6.15 [k]	6.15 [k]	12.3 [k]	6.15	21.85 [e]	28 [e]
Netherlands [b]	19	5.7	24.7	23.2 [h]	19.12	42.32 [dh]
Norway	7.8 [c]	14.1 [c]	21.9 [c]	7.8	14.1	21.9 [d]
Poland [b]	11.26	14.26	25.52	22.71	17.38	40.09 [d]
Portugal	11 [c]	22.25 [c]	34.25 [c]	11	23.75	34.75
Romania	10.5	31.3	41.8	16.5	38.85	55.35 [d]
Russia [b]	0	22	22	0	30.2	30.2 [j]
San Marino	4.2 [c]	16.1 [c]	20.3 [c]	4.7	30	34.7
Serbia [b]	11 [c]	11 [c]	22 [c]	17.9	17.9	35.8 [d]
Slovak Republic [b]	7	20	27	16.4	33.2	49.6 [d]
Slovenia	15.5 [c]	8.85 [c]	24.35 [c]	22.1	16.1	38.2 [d]
Spain [b]	4.7 [c]	23.6 [c]	28.3 [c]	6.25	31.08	37.33 [d]
Sweden	7 [g]	10.21 [g]	17.21	7	20.92 [i]	27.92 [dj]
Switzerland [b]	11.9	11.9	23.8	13.25	13.35 [e]	26.6 [e]
Turkey	9	11	20	15	21.5	36.6
Ukraine [b]	2 [c]	33.2 [c]	35.2 [c]	2.85	37.2	40.05
United Kingdom [b]	9.95 [c]	11.9 [c]	21.85 [c]	12	13.8	25.8 [d]

Sources: Based on information in the country summaries in volume "Social Security Programs Throughout the World: Europe, 2012" [11]

a. Includes Old Age, Disability, and Survivors; Sickness and Maternity; Work Injury, Unemployment: and Family Allowances. In some countries, the rate may not cover all of these programs. In some cases, only certain groups, such as wage earners, are represented. When the contribution rate varies, either the average or the lowest rate in the range is used.
b. Contributions are subject to a ceiling on some benefits.
c. Also includes the contribution rates for other programs.

d. Government pays the total cost of family allowances.
e. Employers pay the total or most of the cost of work injury benefits.
f. A set amount for Old Age, Disability and Survivors (ATP). Central and local governments finance other programs.
g. Contributions finance old-age benefits only. Additional contributions are required for survivor and disability benefits.
h. Plus flat-rate contributions for medical benefits.
i. Government pays for most of the cost of family allowance benefits.
j. Government pays the total cost of unemployment benefits.
k. Disability benefits are paid under another program.
l. Government pays the total cost of basic unemployment insurance: employer and employer and employee pay the cost of voluntary unemployment insurance.

The data given allows referring total rate of social contribution in Ukraine to the category of the highest (together with Hungary, Latvia, Italy, Portugal, and Romania). In estimating payment parameters load sharing between insured and insured person comes under notice. Most of the countries share it among participants of pension relations equally. In Ukraine as well as in Russia, Byelorussia and Lithuania the main burden of insurance obligations is charged to the employer. We consider amount and structure of earnings subjected to taxation an integral part of the insurance payment analysis. Only such integrated assessment can give objective and consistent description of the level of fiscal burden for payers. This demand is of particular importance in conditions of accumulative forms of retirement pension insurance that assumes use for these purposes of clear balance of personal incomes of insured persons. Under conditions of deficiency of internal funds development of these forms of retirement pension insurance takes place deliberately that can be observed through the example of development of this segment of pension insurance in Ukraine.

It is important to emphasize that behind any of existing forms of pension system is a real sector of economy. Within joint system maturity of economy enables to form receptive labour market and coverage by retirement insurance of all economically active employees and self-employed persons and also to provide a definite wage level (income). This eventually allows forming considerable retirement assets of the insured person and also to direct part of the funds for participation in non-state retirement insurance. Defined contribution pension systems can efficiently capitalize pension savings being accumulated provided availability of qualitative investment environment and instruments of capitalization. In this case investment resources of pension funds stimulate not only development of economy but also financial market with its infrastructure. S. Ya. Veselovsky pays attention to intense internalization of economy inherent to globalization processes. In his opinion this process disturbs existing traditional instruments for control of developing economy (taxation policy, income policy, industrial and structural policy and other components) [4, p. 86]. He also reports of progressively stable action on inner market dynamic (of countries) from the direction of transregional capital markets, raw materials resources, and commodities, which takes global forms. Analysis of peculiarities of the recent crisis permitted to define distinctive features of the functioning of economic sector under the current conditions. According to O. G. Bilorus and O. V. Gavrilyuk, these peculiarities are expressed in slowdown in the growth of real sector of economy and in acceleration of growth of security assets (capitalization of economy), deterioration in quality of the assets of stock market because of the rise of the part of speculative derivatives and government liabilities without reliable guarantees of repayment and also in fast-moving build-up of money supply [12, p. 11]. The authors point to the impossibility of today's capitalism to guarantee expanded reproduction of real economy that explains presence of dysfunctional fiscal systems of western countries [12, p. 11]. Financial domination of small group of donor countries, their real monopoly on financial resources and control of financial flows in global space are also considered as outstanding characteristics of financial globalization. The result of such policy, according to V. S. Lukyanov, is *chronicle financial insufficiency of peripheral countries*. The consequence of this is violent behavior of the so-called international financial hunters, growth of external debts of peripheral countries, and ultimately, blowing up of their financial sovereignty [13, p. 64]. Researchers also pay their attention to the essential deepening of present-day global disbalance between consumption and accumulation, which in recent decades was considered as generator of global economic development. The demand in countries with high level of consumption, to start with USA, stimulated export production in countries with high level of accumulation, China, in the first place. Under present conditions, as noted by the authors, such mechanism does not work. Aligning of said disbalance inevitably creates difficulties both in investment-oriented countries and in countries with consumer model of economy. For the former this means narrowing of external demand, for the latter – deterioration of the achieved living standards, for which they hardly will agree [12, p. 11]. Besides, aggravation of antagonism between labour and capital, economic development and environment, allocation of resources and productive forces, national regulation and global character of international trade and finances, migration processes and many other problems are observed [12, p. 12]. To some

extent modern conception of retirement insurance is directed to smoothing of contradictions and disbalances in economic relations. Integrating employer-employee relationship, economy, and financial sector, different forms of retirement insurance can have positive effect on abovementioned spheres through insurance mechanism. Along with this highly uniform development of accumulative forms of retirement insurance is observed. Accumulative pension funds are widely spread in Australia, Great Britain, Canada, Switzerland, and Spain [8]. Availability of pension savings funds in Ukraine is indicative of the demand for this type of retirement insurance. The rate of capture of potential contingent and level of financial stability (taking into account capability of settling debts on available liabilities) can serve as evaluation of viability of this sphere of retirement insurance. The volume of debt capital (outside funds) and capability to invest it into qualitative investment environment defines financial capabilities of the given pension fund or type of retirement insurance. Amount of investment of pension funds as a percentage of GDP is shown in Table 5.

Table 5

Total investment of pension funds in OECD and selected non-OECD countries, 2004-2012. As a percentage of GDP

	2004	2005	2006	2007	2008	2009	2010	2011	2012
1	2	3	4	5	6	7	8	9	10
Australia	70.06	78.36	87.90	106.55	93.44	82.84	89.83	92.93	91.73
Austria	4.42	4.78	4.92	4.80	4.44	5.09	5.37	4.93	5.31
Belgium	3.96	4.38	4.19	4.40	3.29	4.05	3.74	4.22	4.58
Canada	53.91	58.21	63.18	62.41	51.43	60.19	64.54	63.64	67.28
Chile	55.97	55.62	57.53	61.01	49.82	61.76	62.99	58.53	60.03
Czech Republic	3.41	3.96	4.35	4.57	4.98	5.74	6.13	6.47	7.13
Denmark	30.76	33.77	32.62	32.38	47.01	43.13	49.28	49.56	50.06
Estonia	1.77	2.66	3.58	4.41	4.53	6.92	7.48	7.11	8.71
Finland	61.87	68.57	71.88	70.62	60.72	77.22	82.84	76.14	79.33
France	…	0.02	0.04	0.07	0.10	0.16	0.21	0.25	0.33
Germany	3.82	4.07	4.23	4.64	4.77	5.32	5.40	5.71	6.28
Greece	…	…	…	0.01	0.01	0.02	0.02	0.04	0.04
Hungary	6.85	8.46	9.76	11.07	9.67	13.31	14.90	3.80	3.25
Iceland	106.43	119.63	129.63	130.98	112.87	119.25	124.18	128.81	141.00
Ireland	41.50	47.80	49.37	45.89	35.51	44.77	48.25	45.47	49.21
Israel	26.13	31.40	31.10	32.70	42.38	46.54	48.87	49.29	52.04
Italy	2.54	2.77	2.99	3.23	3.41	4.11	4.56	4.87	5.60
Japan	24.93	27.12	26.15	25.63	23.09	26.66	25.29	25.18	26.34
Korea	1.59	1.73	2.79	2.84	2.98	3.55	3.95	4.46	5.35
Luxembourg	0.34	1.06	1.04	1.00	1.04	2.34	2.00	1.95	2.03
Mexico	5.63	9.02	10.17	9.97	10.11	11.84	12.78	12.90	12.31
Netherlands	108.12	120.67	124.37	135.10	112.74	118.60	129.54	136.19	160.21
New Zealand	11.50	11.38	12.39	11.42	10.44	11.87	14.16	15.67	16.67
Norway	6.51	6.66	6.73	6.96	6.00	7.35	7.63	7.32	7.56
Poland	6.77	8.72	11.11	12.01	10.95	13.49	15.74	14.99	17.19
Portugal	10.17	12.30	13.17	13.20	11.79	13.01	11.41	7.74	8.76
Slovak Republic	…	0.49	2.41	3.72	4.75	6.32	7.41	8.39	9.54
Slovenia	0.90	1.27	1.58	1.81	1.91	2.57	3.06	3.31	3.71
Spain	6.62	7.23	7.48	8.21	7.18	8.13	8.03	8.00	8.41
Sweden	7.28	8.96	9.11	8.53	7.27	8.24	9.47	9.19	10.48
Switzerland	104.02	113.26	114.81	111.96	94.84	108.04	108.48	106.87	113.63
Turkey	0.39	0.67	0.74	1.22	1.49	2.28	2.35	4.13	3.80
United Kingdom	66.73	76.84	81.60	77.38	64.38	80.20	87.90	95.26	95.66
United States	73.02	74.14	76.36	76.81	58.68	69.16	73.84	72.31	74.46
Selected non-OECD countries									
Albania	…	…	…	0.005	0.009	0.013	0.016	0.012	0.020
Argentina	12.10	12.69	13.57	11.51	0	0	0	0	0
Bolivia	19.84	21.50	19.99	21.53	22.60	26.68	27.72	…	..
Brazil	…	…	17.88	16.40	13.60	14.99	14.30	13.83	14.66
Bulgaria	1.99	2.46	2.94	3.87	3.32	4.64	5.67	6.11	7.36
China	0.31	0.37	0.42	0.57	…	0.74	0.70	0.76	0.93
Colombia	8.59	11.43	11.29	15.05	14.38	13.28	16.13	16.88	18.19
Costa Rica	4.66	5.78	6.73	6.19	7.13	7.95	7.62	8.66	9.76
Croatia	3.54	4.38	5.63	6.85	6.85	9.32	11.76	13.03	16.02

Ending of Table 5

1	2	3	4	5	6	7	8	9	10
Dominican Republic	0.66	1.28	1.82	2.41	3.11	4.07	4.78	5.57	6.63
Egypt	…	…	…	…	2.44	…	…	…	…
El Salvador	13.60	16.86	18.70	20.16	21.16	24.82	26.55	26.81	28.85
Gibraltar	…	…	…	…	…	…	…	1.67	…
Hong Kong	22.60	24.26	27.25	30.44	27.38	31.49	34.16	31.87	34.29
India	…	…	…	…	…	…	019	017	030
Indonesia	2.41	2.20	2.24	2.22	…	…	…	1.84	…
Jamaica	15.83		16.82	19.64	19.69	20.87	22.46	22.83	22.12
Kenya	11.12	12.09	13.81	…	12.92	12.92	16.93	15.24	17.14
Kosovo	…	…	…	…	…	…	…	…	15.08
Latvia	0.99	1.32	1.61	…	…	0.70	0.85	0.79	0.90
Lesotho	…	…	…	…	…	…	…	10.78	12.58
Liechtenstein				40.46	41.18	55.60	…	…	…
Macedonia	…	…	…	0.86	1.22	2.13	2.88	3.48	4.61
Maldives	…	…	…	…	…	…	…	3.99	7.83
Malta	…	…	…	…	…	…	…	0.52	8.42
Mauritius	…	…	…	…	…	…	…	…	1.81
Namibia	…	…	…	…	…	…	75.08	73.10	78.19
Nigeria	…	…	…	4.10	4.46	5.48	6.89	6.33	7.73
Pakistan	…	…	…	0.007	0.007	0.008	0.009	0.010	0.016
Panama	…	0.35	0.45	0.52	0.54	0.61	0.66	0.70	
Peru	10.94	12.49	15.27	18.25	13.60	18.41	20.24	16.83	18.41
Romania	…	…		0.003	0.18	0.49	0.89	1.23	1.74
Russian Federation	…	…	0.86	0.93	0.84	1.35	1.84	3.10	3.48
Serbia	…	…	…	0.13	…	0.27	0.34	0.39	0.48
South Africa	78.25	81.72	91.71	96.15	86.73	78.22	82.51	81.97	…
Suriname	14.53	13.09	10.01	…	…	…	…	…	…
Thailand	4.70	4.87	4.98	5.18	5.13	5.71	5.72	5.87	6.15
Trinidad and Tobago	…	…	18.25	17.09	…	…	…	…	…
Ukraine	…	…	…	…	0.06	…	0.11	0.11	…
Uruguay	11.26	12.21	13.39	13.24	10.99	14.68	17.26	17.23	19.41
Zambia	4.07	3.77	…	…	…	…	…	…	…

Source: Pension Markets in Focus 2013. OECD. [8]

Thus, the largest ratio of investment resources with relation to volume of GDP is in Australia, Finland, Switzerland, Island, the Netherlands, and USA. The infrastructure of pension funds is represented by forms different in their sizes. It is significant that for countries with developed and stable infrastructures of pension funds indicative is existence of insurance traditions and insurance culture. The test parameter in Ukraine is negligibly small as compared to other countries. It can be due to at least two reasons. Low income hurts the chances of inflow of retirement savings (pension assets). Absence of effective investment environment narrows down potentialities for capitalization of assets being saved and does not stimulate investment of them into saving funds. Bank investment instruments are the basic investment sphere in Ukraine where investment resources are mainly directed to. Real sector of economy is represented by traditional production branches: metallurgy, machinery manufacturing, chemical industry and others. Plants of these industries are usually raw material- and energy-intensive, cost-demanding and non-competitive. It is observed that just fiscal market in the modern fiscal system is potentially one of the most efficient mechanisms for attracting and distributing investment resources. It could be the base for securing economic stability and conducting structural reforms. However, according to researchers, stock market in Ukraine is in critical state with regard to liquidity and capability for capitalization. At the same time poor development of marketable investments narrows greatly competitive power of Ukraine relating to the issues of obtaining investments from international capital markets and accumulation of funds of internal investors [14, p. 27]. Horrible state of valuable securities is considered as the outcome of government's attitude to stock market not as the source of resources for development of economy but as a source for filling national budget. For this purpose real monopolization of the whole branches of economy has decreased the number of the instruments of stock market to a critical level. And poor development of stock market infrastructure has slowed down circulating of capital that induces capital outflows of national and foreign in-

vestors [14, p. 27]. At the same time functioning of various pension plans in Ukraine contributes to formation of investment resources and activation in demand and, consequently, to promotion of economic activity of participants of business activity. Such investment potential is being created in the countries with developed system of pension funds. It is specific that by the level of obligatory payments into pension funds throughout GDP such countries lead the way: Australia, Finland, Island, Switzerland, and the Netherlands [8]. The rate of receipts from pension payment in Ukraine is characterized by low level and is between Albania and Pakistan. Thus, low level of real internal sources for formation of retirement assets within defined contribution pension insurance is a limiting factor for both development of economy and increase of living standards. High level of pension payments as part of GDP is also typical for countries with developed economies and actively functioning funded forms of retirement insurance: Australia, Canada, Finland, Island, the Netherlands, and Switzerland [8]. Distinctive feature of the funded forms of the national retirement insurance is comparatively low income level. Of course, it is difficult to analyze this index in isolation from the level of pension payments under other pension plans existing in the country. It is important to emphasize that low level of incomes saved for retirement age from different sources builds up pressure on government sources of payments. Whenever national pension is the only source of revenues of a person, its low rate leads also to dissatisfaction of the acting pension scheme and to the growth of social strain in the country. Therefore the purpose of pension schemes (systems) under such conditions is elaboration of the model capable apart from accomplishment of social tasks to stimulate economic development, to be insensible to risks and to remain financially stable in the long run. N. Yu. Borisenko defines fiscal sustainability of Pension Fund as quality of its financial resources, which enables to guarantee independent development of the national pension system and preservation of its paying capacity under the conditions of allowable level of long-term social risk of loss of revenues: for employees due incapacitation in the event of age and disability; for unemployable members of the family due to supporter's death; for separate categories of the working population due to longtime accomplishment of specific activities of the professions [9, p. 31]. However, there are different approaches to representation of the concept of business solvency. On the one hand, this category implies simple active balance of payments. Equivalence of social expenditures is not frequently focused upon within the given context. It must be noted that in European countries financial rules aimed at balancing the budget are dominating. These rules are based mainly on spending minimization and not on growth of income, which, according to V. V. Zaichikova, are sufficiently restricted under conditions of global financial crisis that stipulates severe budget constraints [15, p. 59]. She makes conclusion that in carrying out national economic policy not reduction in budget deficit should be of primary importance but achievement of positive dynamics of the indices of economic development [15, p. 60]. Such approach allows together with assessment of resistance of pension system to give qualitative estimation of social status of people.

P. A. Orlov-Karba points out that social location of population is being formed as a result of action of a system of factors, which form social conditions for existence and development of people. He accentuates that each type of society forms its own type of normal social location [16, p. 17]. Assuming validity of such typing we are of the opinion that it must cover national and cultural peculiarities of the forms and methods of rendering financial support to some or other category of population. In such case inequality of financial support has to be attributed to system disbalance of social development.

According to V. S. Lukyanov, globalized financial sphere shall be considered as maximally universalize object and in the meantime efficient instrument of peaceful international settlement of sharp contradictions [13, p. 63]. Therefore social disbalances, to our opinion, also require harmonization. It is frequently argued that it is impossible to deal with the problems of social-economic development with the help of scientific theories and other instruments of contemporary science. T. I. Artyomova emphasizes that the reason of global disbalances is statement that global financial system was built on unsound suppositions. Perverted notions underlie not only financial market but also the whole of social order [17, p. 16]. It has been argued that with variety of the forms of public and government structure search of the own model shall be considered the optimal path of development. On the assumption of S. I. Vovkanich updating of the prospects for information-space (3D) model of state building is based on the national idea. An effort of delineating its vectors has been carried out during Round Table *Ukrainian national idea as spiritual intellectual code of unity: ethnic, integration and civilization vectors* (2011). The idea consists of two components – great and little national ideas. The first one is based on the statement of Ukraine as unitary, Ukrainian and worthy of man. The second idea assumes *knowledge, information and movement as tools for the purposes of the first one* [18, p. 14].

At the same time, according to P. G. Nikitenko, mankind came into new stage of social development and comes to the dilemma of new paradigm as rational global social-economic development [19, p. 102]. It involves departure from consumer conception of social development and noospherization with highest priority value and inherent value of personal enhancement and preservation for future generations under conditions of global harmonization of the system Nature–Individual–

Society [19, p. 102]. Researchers emphasize that building of spiritual social-economic formation under the noospheric principles defines the construction of new society not only in a separate country but also in civilization as high tech, spiritual-moral and environmentally safe [20, p. 209–210]. In the context of the marked paradigm pension system can be harmonically combined providing formation of the model focused on human development, accumulation of national investment resources and stimulation of noospheric innovations.

Conclusions. Summarizing all above-mentioned, we can conclude that mechanism of the three-pillar retirement insurance model has not yet disclosed the whole of its potential related to both the implementation of the tasks of social protection and the goals of activation and improvement of the efficiency of economy. Instruments of retirement insurance have failed to find general distribution. As a result, pension funds as sources for formation of national investment resources do not provide economic sector with long-term financial resources needed for innovative development. Accelerating globalization processes, becoming more involved demographic situation, financial-economic crises and system disbalances also complicate functioning of pension systems. In our view for the purpose of improving the concept of the national pension system it is necessary:

i) To work out and introduce methodology for formation of GDP and social indicators with inclusion of the part of GDP from shadow economy.

ii) To work up parameters of the national indicators for normal social development taking into account latest global trends.

iii) To bring the conception of pension system of Ukraine into line with the national idea and modern paradigm of global development.

Implementation of the abovementioned proposals will enable to keep up to date functioning of all three pillars of pension system in line with the trends of global social development; to guarantee increasing the level of social protection in the context of social-economic development of the country.

The perspectives for further research in this line can be development of solutions for formation of the integral risk-resistant conception of pension system and harmonization of it with actively transforming global public space.

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Рад Н. С. Концепція сучасної пенсійної системи як результат трансформаційних процесів у світовому вимірі

В статті досліджено окремі аспекти розвитку національної пенсійної системи в контексті світових трансформаційних процесів. Виявлено та окреслено умови її модернізації. Підкреслено, що змішані системи пенсійного страхування здатні найбільш ефективно протистояти сучасним ризикам та викликам, зокрема стрімкому старінню населення. Проаналізовано основні формоутворюючі показники систем пенсійного страхування різних країн. На підставі їх аналізу відмічено, що проблеми економічної і фінансової сфери набули характеру глобальних дисбалансів. Визначені основні риси ризикосталої моделі вітчизняної пенсійної системи. Відмічено, що ключовим звеном ефективної концепції національної пенсійної системи є синтез соціальної та економічної складових в контексті спрямування до принципів соціальної держави. В ході дослідження була застосована сукупність загальнонаукових методів: узагальнення, групування, аналізу досліджуваних категорій. Теоретичні узагальнення та висновки будувались на підставі абстрактно-логічного методу. Запропоновано напрямки удосконалення концепції пенсійної системи в контексті особливостей національного культурно-історичного розвитку та сучасних тенденцій, ризиків та викликів суспільного розвитку.

Ключові слова: пенсійна система, трансформація, соціальна держава, проблеми, ризикостала модель.

Рад Н. С. Концепция современной пенсионной системы как результат трансформационных процессов в мировом измерении

В статье исследованы отдельные аспекты развития национальной пенсионной системы в контексте мировых трансформационных процессов. Выявлены и обозначены условия ее модернизации. Подчеркнуто, что смешанные системы пенсионного страхования способны наиболее эффективно противостоять современным рискам и вызовам, в частности стремительному старению населения. Проанализированы основные формообразующие показатели систем пенсионного страхования различных стран. На основании их анализа отмечено, что проблемы экономической и финансовой сферы приобрели характер глобальных дисбалансов. Определены основные черты рискоустойчивой модели отечественной пенсионной системы. Отмечено, что ключевым звеном эффективной концепции национальной пенсионной системы является синтез социальной и экономической составляющих в контексте следования принципам социального государства. В ходе исследования была применена совокупность общенаучных методов: обобщения, группировки, анализа исследуемых категорий. Теоретические обобщения и выводы строились на основании абстрактно-логического метода. Предложены направления усовершенствования концепции пенсионной системы в контексте особенностей национального культурно-исторического развития и современных тенденций, рисков и вызовов общественного развития.

Ключевые слова: пенсионная система, трансформация, социальное государство, проблемы, рискоустойчивая модель.

Rad N. S. Conception of the Present-day Pension System as a Result of Transformation Processes in Global Determination

The article deals with some urgent problems related to the development of pension system in Ukraine in the context of global transformation processes. Identified and specified are conditions for it to be improved. It is emphasized that endowment retirement insurance is capable efficiently confront present-day risks and challenges, especially rapid ageing of population. The main forming factors of retirement insurance systems of different countries are analyzed. Based on their analysis it is assumed that problems related to economic and financial sectors grow into global imbalances. The basic features of risk-resistant model of the national pension system are specified. It is observed that the key element of the efficient concept of the national pension system is synthesis of social and economic components in the context of adhering to the principles of social welfare state. The research is based on a system approach using general scientific methods: generalization, pooling, analysis and synthesis. We used abstract-logical method for making conclusions. The lines for improvement of the concept of pension system in the context of the peculiarities of the national cultural and historic development and contemporary trends, risks and challenges of social development are proposed.

Keywords: pension system, transformation, social welfare state, problems, risk-resistant model

Received by the editors: 13.10.2015
and final form 28.12.2015

UDC 657.47

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METHODS AND SYSTEMS FOR ALLOCATING AND REPORTING INDIRECT COSTS IN MANAGEMENT ACCOUNTING

While performing their activities enterprises aim at achieving financial results that allow their normal operation under market conditions.

Costs are one of the elements that are directly related to the formation of the financial result. Cost accounting is one of the most important sectors in accounting, having various functional dimensions as an information system. Thus, accounting should create information for measuring the performance or efficiency of an enterprise. This is achieved by reporting the flows associated with the movement and changes of resources (material, labour and financial). Revenues and expenditures are the factors related to the measurement of efficiency. The reporting of operating expenses is not only related to the creation of information on efficiency, but it is also relevant to calculating the cost of products and services provided by the enterprise. The relevance of cost information is expressed as follows:

First, cost is used to measure the elements of financial statements. For example, in the balance sheet the tangible fixed and intangible assets and inventories are shown by their cost. The information on the actual cost is used for the preparation of the statement of revenue and expenditure, in which the operating costs are classified based on their function.

Second, the information on the actual cost is used to analyze the profitability of the products manufactured and services rendered.

Third, the information on the actual cost is used in pricing. This applies primarily to products and services whose prices are subject to regulation. Some contracts are concluded on a "cost-plus" basis. Construction enterprises enter into a contract with investors for construction, in which the contractor is reimbursed for the allowable or otherwise defined costs plus a percentage on these costs or a fixed fee. In this case, accounting information about the cost of the accounting product (construction works) according to construction contracts, construction sites, contract stages and calculation objects is used.

Cost information is also used for the purposes of tax legislation.

The creation of accounting information about costs should be oriented to the needs of management in the following areas:

✓ examining and studying the costs and cost prices that are formed on this basis for the various activities;

✓ determining the bases for assessing certain elements of the assets of an enterprise;

✓ using the information on the cost of production and the services rendered to compare with the sale prices and to find out the results;

✓ forecasting and planning of expenditures and revenues (a pre-established cost, production budgets, etc.);

✓ identifying the differences (deviations) between the actual costs and the pre-established ones, etc.

The process of making tactical and strategic managerial decisions is based on information about costs, systematized according to different classification signs.

It should be noted, however, that the cost of products and services include various costs. In order to solve relevant problems in the reporting process they are grouped in different ways.

According to one of the renowned authors in the theory of management accounting – C. Drury, accounting primarily accumulates information about three categories of costs: materials, labour and overheads. Costs are summarized in the following areas: 1) for calculating and evaluating the production cost; 2) for planning and making managerial decisions; 3) for carrying out a control and regulation process. Moreover, in each of these three areas, in turn, the costs are further elaborated depending on the purpose of management[1].

Traditionally accounting practice in our country classifies costs according to the way they relate to the cost of products and services rendered. According to this feature, costs are classified into direct and indirect. Direct costs are directly related to the manufacturing of a specific type of product or service. They relate directly to the cost based on the relevant primary documents. They include the costs related to raw materials, wages of workers directly employed in manufacturing, insurance accrued on these wages, etc. Indirect costs are associated with the manufacturing of several products, respectively activities, objects, etc. Examples of such costs include depreciation of machinery and equipment, maintenance and operation of machinery and equipment, etc.

Indirect costs are allocated and charged to account by specific objects in proportion to a pre-selected basis, i.e. there are two aspects, two successive operations: allocation of costs and their inclusion in the cost (See figure 1).

[1] See ДРУРИ. К. Введение в управленческий и производственный учет. – Москва, Аудит. ЮНИТИ, 1997. – С. 31-32.

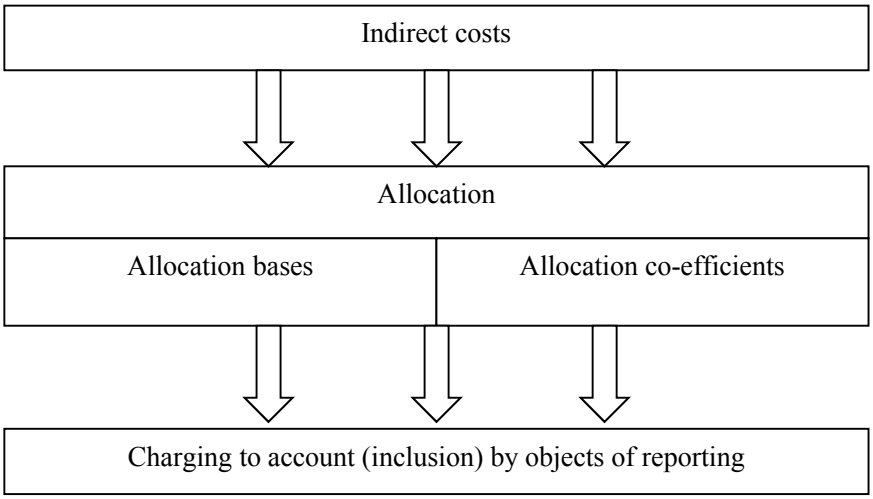

Fig. 1. Allocating and charging indirect costs to account by objects of reporting

The bases for allocating indirect costs by types of production and activities and the criteria for their selection are quite different. The choice of one or another basis is often subjective. As a rule, the allocation of indirect costs is provisional. Despite some inaccuracies in the allocation of costs, it appears necessary and topical under the modern conditions, as well.

The problem of indirect costs has been solved differently in the practice of the developed countries.

One of the oldest methods used for the allocation of costs in calculating the cost of production is the method of coefficients. The aim of its application is to determine the full cost and margin (result) of the production output.

The essence of this method is expressed in the following:

✓ The direct costs are reported and charged to account by purpose;

✓ The indirect costs are reported in total and then are allocated by means of coefficients and are charged to account by the types of production.

In this respect the method of cost analysis centres[1] is interesting. This method is currently used by French companies. The process of cost accounting relates to the registration of costs, their preliminary accumulation and allocation and charging them to account by purpose as direct and indirect costs by types of products manufactured and services rendered.

The essence of this method is expressed in the following:

• Formation of cost analysis centres, which facilitates the allocation of indirect costs. In terms of their significance, these cost analysis centres correspond to the organizational-production structure of the enterprise.

• The production costs are grouped on the basis of their charging to account by purpose – as direct costs, and on the basis of their inclusion in the product cost – as indirect costs.

As a rule, the cost analysis centres meet the structural subdivisions of the enterprise, which carry out a certain activity and respectively the costs of implementing it. It is possible to create centres to meet specific information needs. There are two types of centres – primary and ancillary cost analysis centres.

The costs incurred in the primary centres are allocated and included in the cost of products manufactured and services rendered.

The costs incurred in the ancillary centres are allocated and charged to the primary centres. These cost allocations are called primary and secondary allocation of costs, respectively.

In search of a solution to the problem of indirect costs, the USA developed the Direct costing system. The 'Direct costing' concept was promoted by the National Association of Cost Accountants (later National Association of Accountants) in April 1954. This document, intended for practice, also defines the fixed costs that should be excluded when calculating the cost of each product. Fixed costs are associated with the maintenance and operation of the enterprise and do not depend on the volume of its production and sales. They also relate to the organization and management of the enterprise. They include the costs of development and expansion of enterprises. The majority of these costs are indirect. They are not included in the cost of the output. This system of calculation is suitable in cases where the proportion of the total production costs is not high. Therefore, it has two versions: simplified and improved.

[1] In earlier works in the field of management accounting this method is known as the method of homogenious sections (Methode des sections homogenes). See LASSEGUES, P. Gestion de l`enterprise et comptabilite. – Paris, Dalloz, 1972, p. 474; LAUSEL, P. Comptabilite analytique. – Paris, Sirey, 1971, p. 43.

In the improved version, the algorithm includes the allocation of indirect costs.

A number of enterprises use high-tech equipment, which reduces the relative share of direct costs – for materials and labour, and increases the indirect costs – depreciation of equipment, expenses for salaries and insurance of the personnel employed in the operation and maintenance of this equipment, etc. R. Kaplan, one of the prominent researchers in the field of management accounting, states that the industrial cost structure changes in the course of time and this is a historical fact. And if at the beginning of the century the general (indirect) costs accounted for 50-60% of the direct labour costs, today the percentage of the general (indirect) costs compared to the direct labour costs is significantly higher – most often from 400 to 500%, and in some complex productions it exceeds 1000%[1].

Often in performing their activities enterprises need to attract resources for a long period in the production, marketing, supply and so on. Therefore, notwithstanding the fact that according to estimates the equality of marginal costs and earnings carries a maximum income, the application of the Direct costing system is justified in certain conditions: enterprises in which variable (direct) costs make up a significant part of the costs; the range of products manufactured is small.

If these conditions are not present, it is believed that the cost indicator is distorted to some extent.

Traditional systems of calculation assume that the allocation of indirect costs is linked to factors which reflect the quantitative aspects of the work done – man-hours, machine-hours, quantity of processed products, etc.

The development of new forms of production organization has changed these ideas. As noted by P. Mevellec,[2] in modern enterprises there is a growing importance of the diversity of the products that enterprises manufacture with a view to satisfy market demand. Companies incur costs, which are indirect, they are not determined by the volume of production, but rather by the need to maintain a variety of products manufactured. For this purpose, they expend resources, which are not dependent on the size of the production series (batch). These are the costs that are made for: setting and adjusting the machines; controlling the quality of the series that manufacture new products; supply activities; customer service, etc.

The weaknesses and inaccuracies in the allocation of indirect costs (mainly based on direct labour costs) in the classical systems of calculation lead to the emergence of a method for calculating the cost based on activities – Activity-based costing (ABC). It is based on hypotheses and methods of allocating and charging the costs to the cost price, which are considered more appropriate than those that existed before. This new costing approach is based on the idea concerning the activities - products interrelation.

The concept underlying the ABC method suggests management control based on knowledge about processes. The ABC method allows measuring of costs not only by activities but also by functions, centres, etc., as well as determining the contribution of the activities in the value creation by the enterprise. This is not just a system for monitoring but also a system oriented to management actions.[3]

The application of the ABC method is related to the use of certain terms:

- An **activity**, which is defined as a set of works or activities carried out by a person or a machine. It breaks down into separate simple operations and at the same time defines the consumption of resources for their implementation. For the purposes of applying the method, the enterprise breaks down by activities rather than by functions.

The activities can be divided into two broad groups: activities relating to the existence of the enterprise and priority activities.

- The grouping of activities in manufacturing is of particular interest:

✓ Activities at an individual product level. The costs for these activities include: raw materials, wages, insurance of those directly employed in manufacturing, electricity, maintenance and operation of the equipment, etc.;

✓ Activities at a series (batch) level. The costs for these activities involve assembling the goods, the movement of materials, orders for deliveries, inspection and control of deliveries, etc.

✓ Activities at a product maintenance level. These include the costs for engineering designs and technical documentation (product characteristics), changes in production technology, product upgrades, etc.

✓ Activities relating to the organization and management of the enterprise as a whole.[4]

[1] See Kaplan, R. Cost accounting: a revolution in the making. – Corporate accounting, printings 1985. Quoted after EVRAERT. Set P. Mevellec. Calcul des couts: il faut depasser les methods traditionnelles. – R e v u e francaise de gestion, 1990, mars – avril – mai, p. 18.

[2] See MEVELLEC, P. Systems de calcul de couts de revient et subventionnement croises. – R e v u e francaise de comptabilite, 1993, №241, p. 59.

[3] The drawbacks and inefficiency of the traditional systems of costing are subject of study in the works of Eiler and Goletz in 1982, ad in a number of publications by Kaplan and Johnson in 1987. The technique of applying the ABC method is described in a book jointly by Johnson and Kaplan. Along with that the method is practically applied by R. Cooper in enterprises of Hewlett-Packard, Siemens, as well as in some other enterprises of Tektronic, Scovill, General Electric, etc.

[4] See MORRARD B. Comptabilite analitique et controle de gestion. www.gestion.unige.ch. The grouping of activities in Anglo-Saxon literature is presented in a similar way.

• **Cost driver.** The French authors use the term "inducteur".

The ABC method is characterized by tracing the transfer of direct costs by objects of costing. This is done by using cost drivers. Their application explains the consumption of activity costs and the consumption of product activities. They are used to link the activities to the objects of costing.

Similarity may be sought in the application of the factors and allocation of indirect costs, which is known from our practice.

The most commonly used cost drivers in the industrial sector can be grouped as follows:

Cost drivers relating to the volume of output:

✓ the area occupied by workshops and other subdivisions;
✓ number of installed machines;
✓ the average number of workers;
✓ direct labour costs;
✓ cost of the basic materials;
✓ number of man hours;
✓ number of machine hours;
✓ amount of manufactured products, etc.;

Cost drivers that have a complex nature and express the characteristics of

✓ the activities performed are not related to the volume of production:
✓ number of series (batches) of a given product;
✓ number of sellers;
✓ number of customers;
✓ length of a production cycle;
✓ number of the orders fulfilled per month;
✓ number of requisitions;
✓ number of readjustments of machines etc.

The term '**processes**' is used in relation to the application of the ABC method. Following the logic of activities, they express the content of manufacturing products.

As already stated, this method is characterized by tracing the costs and causality in the formation of the cost. There arises the question of the liability for incurring the costs, which leads to the problem of budgets development. As a rule, their design is based on the idea of centres of responsibility. They do not overlap with activities. The French author M. Lebas, who along with P. Mevellec is one of the most prominent researchers in the field of activity costing presents a matrix model, in which the enterprise is seen as a network of activities (see figure 2).[1]

Functions / Processes	Deliveries	Workshop – mechanical processing	Workshop – assembling	Control	Sales	Administration
Accepting orders		●	●		●	
Management of product changes	●	●	●	●		●
Invoicing			●	●	●	●
Quality control	●	●	●	●		
…….						

Fig 2. Matrix structure of an enterprise, presented as a network of activities

As can be seen in Chart 2, the enterprise is shown as a grid, in which the functions and processes intersect in the squares. According to the author, not every intersection of columns and rows can be identified as an activity (in this figure these are the cells with the black dots). This way of interpreting the structure of the enterprise allows easily to identify the activities, which are determined on the one hand by the functions (centres of responsibility), and on the other – by the processes that generate costs (causality).

In this situation, budgets should be developed according to activities. On this basis, the resources that will be needed for each activity are identified and its contribution in the general plan of activities is evaluated.

The application of the ABC method passes through the following stages:

First, identifying and classifying activities. There are several approaches:

• The "Top down" approach. The enterprise management prepares an activity classifier;
• Processing and re-using documents relating to processes;
• Conducting interviews with the staff in order to gather information about the activities.

Second, identifying activity costs. At this stage, information should be 'produced' regarding the costs associated with the activities.

Third, determining the cost of the cost driver. For this purpose we need information about the activity costs and the volume of the activity.

[1] See LEBAS M. Du cout de revient au management par les activites. – R e v u e francaise de comptabilite, 1994, №259, p. 48.

Fourth, including the activity costs in the cost of products manufactured and services rendered. This stage involves:

- identifying all activities that relate to the manufacturing of a product (providing a service);
- identifying the amount of units of each activity used for manufacturing a unit of production (service);
- charging to account and including the costs by products and applying the cost of the cost driver for each activity.

Regardless of the advantages, this method also has disadvantages: it is hard and expensive to implement; it is based on subjectivity when including the costs by products; there is a danger of the desire to minimize costs at any cost; the hypothesis of a linear relationship between the activities and resources consumed.

In conclusion, it can be said that the approaches and methods for allocating indirect costs that exist in management accounting reflect the tendency to bring more accuracy and precision in this regard, but also that this issue remains currently controversial and open.

Симеонова Р. Методи і системи для розподілу і повідомлення постійних витрат у бухгалтерському та управлінському обліку

Одна з головних проблем у бухгалтерському та управлінському обліку, яка завжди була актуальною, і для якої рішення знаходяться в теорії і практиці, посилається на розподіл і повідомлення про постійні витрати.

Постійні витрати – важливий елемент вартості за поточних умов. У статті обговорюється важливість вартості як у фінансовому, так і бухгалтерському та управлінському обліку – особливо відносно управління витратами. У сучасних умовах, має місце зростання частки постійних витрат у вартості промислових товарів і послуг. Це неминуче асоційоване з їх розміщенням, яке як правило тимчасове.

У статті надано різні методи і моделі розподілу постійних витрат: метод коефіцієнтів, метод аналізу центрів витрат і "директ-кост" система. Пошук можливостей поліпшити розподіл прямих витрат є в сполученні з грунтованим на методі (ABC). Стаття вивчає концептуальні принципи і директиви для його застосування.

Ключові слова: бухгалтерський та управлінський облік, вартість, умови, розміщення.

Симеонова Р. Методы и системы для распределения и сообщения постоянных расходов в бухгалтерском и управленческом учете

Одна из главных проблем в бухгалтерском и управленческом учете, которая всегда была актуальной, и для которой решения ищутся в теории и практике, ссылается на распределение и сообщение о постоянных расходах.

Постоянные расходы – важный элемент стоимости при текущих условиях. В статье обсуждается важность стоимости как в финансовом, так и бухгалтерском и управленческом учете – особенно относительно управления затратами. В современных условиях, имеет место рост доли постоянных расходов в стоимости промышленных товаров и услуг. Это неминуемо ассоциируется с их размещением, которое как правило временное.

В статье приведены разные методы и модели распределения постоянных расходов: метод коэффициентов; метод анализа центров расходов и "директ-кост" систему. Поиск возможностей улучшить распределение прямых расходов состоит в сообщении с основанным на методе (ABC). Рассмотрены концептуальные принципы и директивы для его применения.

Ключевые слова: бухгалтерский и управленческий учет, стоимость, условия, размещения.

Simeonova R. Methods and Systems for Allocating and Reporting Indirect Costs in Management Accounting

One of the main issues in management accounting, which has always been topical, and for which solutions are sought in its theory and practice, refers to the allocation and reporting of indirect costs.

Indirect costs are an important element of cost under the current conditions. The paper discusses the importance of cost both in financial and management accounting – especially regarding cost management in different directions. Under the present conditions, there is an increase in the share of indirect costs in the cost of manufactured goods and services. This is inevitably associated with their allocation, which as a rule is provisional.

The current paper studies the various methods and models of allocating indirect costs: the method of coefficients; the method of cost analysis centres and “Direct costing” system. The search for opportunities to improve the allocation of these costs is related to the Activity-based costing method (ABC). The paper studies the conceptual foundations and guidelines for its application.

Keywords: management accounting, cost, conditions, allocation.

Received by the editors: 03.12.2015
and final form 28.12.2015

UDC 336.22+336.275(497.2)

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SET-OFF AS A MEANS FOR EXTINGUISHING FINANCIAL (PUBLIC) OBLIGATIONS IN THE REPUBLIC OF BULGARIA

Introduction

The execution of financial obligations in the Republic of Bulgaria can take three forms: voluntary execution, set-off and enforcement. Therefore, set-off is one of the forms of execution. Set-off is also a main legal means in the Bulgarian legal system which finds a wide application both in civil and commercial law, and in financial law.

It is widely accepted in legal theory that set-off is defined as the means to extinguish two counter and liquid receivables (obigations) up to the amount of the lower thereof. This is the extinction of an obligation through the set-off thereof against a counter receivable which the debtor holds against its creditor. The common conditions for the performance of a set-off are: two existing counter receivables/obligations having identical subjects, homogeneity and substitutability of the object of the counter receivables/obligations, liquidity of the counter receivables/obligations, and the receivables being due and payable.

The widely spread monetary character of financial receivables and obligations allows set-off to be used also in financial law. The subject of the present study is the influence of the specifics of regulated public relations and the sovereign method applied in financial law on the requirements and the conditions for the extinction of financial receivables and obligations through set-off.

The legal framework of the requirements and the conditions for the extinction/discharge of financial receivables and obligations through set-off may be general and specific.

The general legal framework is contained in the Taxation and Social Security Procedural Code (TSPC) [1], which regulates the three hypotheses where the set-off of financial receivables and obligations is allowed.

1. Set-off by the revenue organs

Revenue organs have the right to extinguish due and payable public (including financial) obligations which are collected by them through **set-off thereof against** paid or collected, but undue, sums received from financial debtors for taxes, obligatory social security payments, fines and property sanctions, as well as sums liable for reimbursement by the National Revenue Agency (NRA) in accordance with the fiscal or the social security legislation. In this case, set-off may be performed also as against an obligation extinguished by a time bar, when the receivable of the debtor became due and payable before its obligation was thus extinguished (Art.128(1) TSPC).

The set-off of public (including financial) obligations is forbidden when the execution of one of the obligations has been deferred or delayed, due to it hence not being due and payable.

In the cases where the debtor's receivable arises from an unduly paid or liable for reimbursement excise duty, the legislator has limited the type of obligations against which set-off may be exercised. Such receivable may be set off only for the purposes of discharging due and payble public obligations of the same person and which are collected by the "Customs" Agency. The competent organ to perform the set-off is the director of the customs at the domicile or the seat of the person concerned or of the location of the fiscal warehouse – where the person in question is a licensed wearhouse owner, or the competent customs bureau which has issued the relevant certificate of customs registration.

In the case here considered, the set-off may be performed both at the initiative of the revenue organ/customs organ, and at the written request of the debtor. The request for set-off is considered if it is submitted within 5 years, counted from 1 January of the year which follows the year in which the basis for the reimbursement of the relevant sum has arisen, unless the law provides otherwise. In the cases where the financial debtor has requested the set-off, the competent revenue organ evaluates the merits of the request and can impose the performance of an inspection or a check to determine whether the conditions provided for by law for that purpose are present (Art.129(2) TSPC).

The set-off of financial counter receivables/obligations is performed through a unilateral sovereign volition of the competent revenue organ/customs organ. For this purpose, a set-off act is issued within 30 days of receipt of the request therefor, unless an inspection is scheduled for that period. The non-response within the same period on a request for a set-off act is considered an implicit refusal. If the person concerned has not appealed such implicit refusal, they can submit a new set-off request by the end of the time bar period.

The sovereign volition of the competent revenue organ cannot be changed by the debtor. The latter cannot indicate another obligation for set-off which is different than the one set off by the competent revenue organ.

As from the moment of the set-off, no execution of the extinguished obligations can be required, as it would

[1] Published in the National Gazette (NG), issue 105 of 29 December 2005, last amended and supplemented – NG, issue 94 of 4 December 2015.

be without legal basis. Neither party owes any interest to the other, but if any interest is paid it remains subject to reimbursement to the payor.

The set-off act, and the implicit or the express refusal for its issuance can be appealed in accordance with administrative procedure (before the director of "" in the NRA, and when it was issued by a customs organ – before the director of the "Customs" Agency) and before court. The petition therefor must be submitted within 14 days as from the receipt of the act of refusal of set-off or as from the end of the decision period in the case of an implicit refusal. When an implicit refusal is cancelled by administrative or judicial procedure, any express refusal which has followed before the taking of the cancelling decision is also considered cancelled.

Although by exception, the possibility to set off due and payable public (including financial) obligations against undue but paid or collected sums from financial debtors for taxes, obligatory social security payments, fines or property sanctions, as well as sums liable for reimbursement by the NRA in accordance with the fiscal or the social security legislation, is not only its legal right but also its obligation. Such obligation for the revenue organs arises when an enforceable administrative or judicial act or decision is presented to them, and which recognizes, to the benefit of the debtor, the right to reimbursement of sums constituting incorrectly or unduly paid or collected taxes, obligatory social security payments, fines or property sanctions. In these cases, the set-off obligation must be executed within 30 days as from the presenting of the relevant administrative or judicial act or decision.

The set-off is performed up to the amount of the lower obligation, in compliance with the legally established sequence of extinction of financial obligations.

As a result of the set-off, the financial legal relation changes, as one of the obligations in its content is extinguished. As from the moment of the extinction of the counter obligations, the accrual of interest on arrears also stops.

2. Set-off by the competent organ for the determination of the financial obligation

Outside of the cases outlined above, until the start of the enforcement of the financial obligation, the latter may be set off by **the organ which is competent to determine such obligation**. This organ is set out by the law which regulates the relevant financial obligation. If the relevant law does not indicate the organ which is competent to determine such obligation, such organ is inidicated by the director of the relevant central administration, respectively the mayor of the municipality. The manner for the determination of the financial obligation in respect of its basis and amount is by rule regulated in the relevant law, but if the latter does not contain any provisions in that regard, this is done by an act for public receivable, which act is issued in the manner for issuance of administrative acts provided in the Code of Administrative Procedure[1] (Art.166(2) TSPC). This act can be appealed in accordance with the administrative procedure before the mayor of the municipality in the case of public municipal receivable, and before the director of the relevant administration in the case of a public state receivable, in accordance with the rules of the Code of Administrative Procedure.

In the case considered, the organ which is competent to determine the financial obligation is obliged to perform the set-off on its initiative, a basis exists for extinguishing the financial obligation with a due and payable receivable of the debtor for excess sums or such liable for reimbursement, and relating to financial obligations and acts issued by the same organ and which is competent for their determination. A set-off against a financial obligation extinguished by time bar is possible here as well, when the debtor's receivable became due and payable before its obligation was thus extinguished.

By exception, the debtor may also request that set-off be performed. If the competent organ refuses to do so, such refusal is also subject to appeal by the debtor, but in accordance with the rules of the Code of Administrative Procedure within 7 days as from the announcement of the refusal.

3. Set-off during an enforcement procedings

After the start of enforcement procedings in respect of a financial obligation, but before the date of the public sale, the extinction of such obligation through set-off remains possible. Therefore, when basis for a set-off is found during the enforcement procedure for financial obligations, on the debtor's request or the public officer's initiative the procedure must be stopped. The halt remains until the end of the set-off steps' completion but for no longer than 3 months, unless an inspection is scheduled. The procedure is put on hold on the decision of the public officer to whom the debtor has presented written evidence certifying the basis for the set-off. The public officer is obliged to send the request together with the evidence to the relevant organ which is competent to perform the set-off. If as a result of the set-off the obligation is wholly or partially discharged, the enforcement procedure is ended or is continued for the remainder of the obligation, respectively. The set-off influences also any security interests undertaken by the enforcement organs, since the extinction of the main obligation extinguishes also the security interests related thereto.

4. Set-off of financial receivables and obligations in accordance with the special laws

4.1. Set-off in accordance with the Law on the Value Added Tax (LVAT)[2]

Value added tax is imposed on all transactions performed for a consideration and having a translative effect, as well as on the import of goods, performed by all persons registered under the LVAT. The VAT sum paid

[1] Published in the NG, issue 30 of 11 April 200, last amended and supplemented – NG, issue 27 of 25 March 2014.

[2] Published in the NG, issue 63 of 4 August 2006, last amended and supplemented – NG, issue 95 of 8 December 2015.

by the taxable person registered under the LVAT on the purchases made by it, as well as in the case of import of goods - including before the date of its registration if they are available on the date of such registration, is determined by a tax credit which may be whole or partial. The tax credit is by its nature a financial receivable of the person registered under the LVAT against the state budget. On the basis of the existing legal framework, the taxable person has *the legal right to set-off against (to deduct from)* its fiscal obligations for payment of VAT the sum constituting its tax credit.

The taxable person may exercise their set-off (deduction) right of the tax credit sum for the fiscal period during which this right has arisen or in one of the next 12 fiscal periods. A fiscal period within the meaning of the LVAT is the time period after the end of which the registered person must submit a reference-declaration with the results for such period. This period is of 1 month for all registered persons and coincides with the calendar month. The result for the fiscal period is the difference between the aggregate sum of the tax payable by the relevant person for this fiscal period and the aggregate sum of the tax credit for which the set-off right has been exercised for this fiscal period. The registered person determines by themselves the result for each fiscal period – tax to be paid in the state budget or tax to be reimbursed by the state budget.

The right to set off the tax credit against the tax obligations to pay VAT of the same person arises upon the performance by such person of the following two obligations: to include the amount of the tax credit when determining the result for the relevant fiscal period and to indicate the document relating thereto in the purchases diary for such fiscal period.

In the cases where the result for the relevant fiscal period is a tax to be reimbursed by the state budget, a new legal right arises together with a corresponding obligation for the competent revenue organ to set off this obligation of the budget against other existing, due and payable public obligations of the registered person which are collected by the National Revenue Agency, if they have come into being by the date of submission of the reference-declaration. When exercising this right the competent revenue organ is obliged to follow the below sequence:

- in the presence of other due and payable and unpaid fiscal and social security payments obligations collected by the National Revenue Agency, and arisen by the date of the submission of the reference-declaration, the revenue organ sets off these obligations against the tax to be reimbursed as indicated in the reference-declaration;

- when there are no due and payable and unpaid obligations of the types mentioned above, as well as in respect of the remainder left after their discharge, the registered person sets off the tax to be reimbursed or its remainder against the tax due to be paid in as indicated in the reference-declarations submitted in the next two consecutive fiscal periods;

- if after the end of the indicated fiscal periods there is a remainder of the tax to be reimbursed, the revenue organ sets off this remainder against, and in discharge of, due and payable public receivables collected by the National Revenue Agency, or reimburses it within 30 days as from the submission of the last reference-declaration.

The LVAT provides also **two special cases** where the right to set-off in respect of a formed tax credit may arise.

A) Right of set-off of tax credit for available assets and received services before the registration date

The person registered for the purposes of VAT taxation receives the right of set-off of tax credits for the assets, within the meaning of the Law on Accounting, purchased or otherwise acquired before the date of its VAT registration. This legal right arises only for any available assets if at the same time the conditions provided for by Art. 74(2) LVAT have also been fulfilled. This legal right of set-off of tax credit arises also for services received before the date of the VAT registration.

The set-off right of tax credit in the case here considered arises on the date of the person's registration under the LVAT, but subject to the following condition – that the registered person provides a registration inventory of such assets and services within 45 days. The right of set-off of tax credit ends if the registered person has submitted the registration inventory of the assets and services after the 45th day as from the registration date. This legal right may be exercised during the fiscal period during which it has arised or in one of the next 12 fiscal periods, with the available assets, the services received and the tax included in the registration inventory being reflected in the purchases diary for that fiscal period.

B) Right of set-off of tax credit for a second registration

The registered person has the right to set off the tax calculated and paid by it in case of it's de-registration under the LVAT for the assets which are available as at the date of the subsequent registration. In this case, the legal right arises **when the following cumulative conditions have been fulfilled**: the assets available, within the meaning of the Law on Accounting[1], at the date of the subsequent registration under the LVAT have been taxed at the de-registration and are intended to be used to make taxable supplies; the tax calculated at the de-registration has been effectively paid in or has been set off by the revenue organ; a registration inventory on basis of an example has been submitted for the assets no later than 45 days as from the registration date.

The set-off right in this case arised on the date of the second registration under the LVAT, but subject to the following condition – that the person who has registered for the second time submits a registration inven-

[1] Published in the NG, issue 95 of 8 December 2015.

tory of the assets and services within 45 days. If the registered person does not comply with this deadline, its legal right of set-off is extinguished.

The set-off right may be exercised during the fiscal period during which it has arisen or in one of the next 12 fiscal periods, with the available assets and the tax included in the registration inventory being reflected in the purchase diary for that fiscal period.

4.2. Set-off under the Law on corporate revenue taxation (LCIT)[1]

One of the taxes regulated by the LCIT is the corporation tax. The taxable object thereof is the fiscal profit determined in accordance with the rules and conditions provided in such law. The perception of corporation tax is yearly therefore the fiscal period for its determination is a calendar year. The fiscal period for newly-incoporated taxable persons covers the period from the date of their incorporation to the end of the relevant year and for liquidated ones – the period from the beginning of the relevant year until the date of their liquidation, unless otherwise provided by law.

On the basis of the fiscal financial results indicated in the tax declaration from the previous year and the projected fiscal profit for the current year, tax debtors must make monthly or quarterly advance payments for corporation tax. The obligation to make monthly advance payments exists for taxable persons whose net revenue from sales for the preceding year is above 3,000,000 lv., and all other taxable persons must make quarterly advance payments. The following are not obliged to make advance payments: taxable persons whose net revenue from sales for the preceding year is below 350,000 lv., and newly-incoporated taxable persons for the year of their incorporation other than those coming into existence as a result of a transformation in accordance with the Commercial Law.

The monthly and quarterly advance payments are made in the amounts determined by the formulae set out in the law. The amount of the advance payments due by the taxable persons to whom corporation tax is assigned for the current year is reduced proportionally to the amount of the assigned portion of the tax. The taxable persons can on their own initiative reduce the amount of their advance payments, when they consider that they exceed the yearly corporation tax due. This right can be exercised through the submission of a declaration based on example to the competent territorial directory of the NRA.

The monthly advance payments are made by the 15th of the month for which they pertain, and the quarterly are made by the 15th of the month following the quarter for which they pertain - there is no advance payment for the fourth quarter.

After the end of the calendar year, the tax debtors who are subject to corporation tax must, by 31 March of the next year, submit a yearly fiscal declaration (based on example) for the fiscal result and the yearly corporation tax due. The declaration's obligatory annexes are: yearly activity account including its annexes and, if applicable, a copy of the report under the Law on Independent Financial Audit[2]. The taxable persons who at the same time have complied with the following conditions are not obliged to submit a yearly activity account: they have had no activity during the year and they have not reported any revenues or expenses for the year in accordance with the accounting legislation.

When calculating the corporation tax due in the yearly fiscal declaration, the taxable persons have the right to a tax credit for taxes which are similar to, or were imposed instead of, corporation tax, and were paid abroad. The amount of the tax credit is determined separately for each country and type of revenue and is limited to the amount of the Bulgarian tax imposed on such profits or revenues.

The declaration is submitted at the territorial directory of the National Revenue Agency at the registered office of the taxable person. The corporation tax due must be paid in the state budget by 31 March of the next year. For that purpose, a set-off is performed between the tax due and the advance payments made for the relevant year.

If the yearly corporation tax due based on the yearly fiscal declaration is lower than the the advance payments made for the relevant year, the tax debtor may set off the excess against subsequent advance and yearly payments due by it for the same tax, for the year following the one for which the excess exists.

4.3. Set-off under the Law on the taxes over the revenues of natural persons (LTRNP)[3]

The LTRNP regulates the taxation of revenues of all kinds, received by national and foreign natural persons during the fiscal year, except for revenues which are declared as non-taxable under the same law. The revenues' taxation is performed for the year which coincides with the calendar year. The yearly taxable revenue and the yearly tax base are determined separately for each revenue source, while the revenues liable to be taxed with final taxes are excluded. The rules for determining the taxable revenue for each type of revenue source differ. The yearly tax bases calculated for the revenues of the taxable persons (with the exception of revenues from economic activities as unipersonal trader, revenues from other economic activities and from patent

[1] Published in the NG, issue 105 of 22 December 2006, last amended and supplemented – NG, issue 95 of 8 December 2015.

[2] Published in the NG, issue 101 of 23 November 2001, last amended and supplemented – NG, issue 95 of 8 December 2015.

[3] Published in the NG, issue 95 of 24 November 2006, last amended and supplemented – NG, issue 95 of 8 December 2015.

activies) form the aggregate yearly tax base, on the basis of which the tax due is calculated.

Despite taxation being performed for a fiscal year, in the presence of taxation of revenues from several sources it is required that advance payments are made during the year – i.e. revenues from employment activities, from economic activities including by natural persons who are not traders within the meaning of the Commercial Law, rent or other revenues from the usage for consideration of rights and property, as well as revenues from other sources under Art.35 LTRNP.

Thus employers, in their capacity as taxable persons in respect of the tax over revenues from employment activities, are obliged to make advance payments each month on the basis of the monthly tax base at the final payment of the taxable revenue calculated for the relevant month. The amount of the advance payment is determined by multiplying the monthly tax base by 10%.

Tax debtors who are natural persons performing economic activity as traders, within the meaning of the Commercial Law, including unipersonal traders, make advance payments at a tax rate of 15%, in accordance with the rules and conditions set out in the LCIT. Natural persons who are not traders, within the meaning of the Commercial Law, make advance tax payments at 10% of the taxable economic activity revenue. Natural persons receiving rent or other revenues from the usage for consideration of rights and property owe tax at 10% of the difference between the taxable revenue and the social security payments which such persons are obliged to make for their own account. There are no advance payments to be made on revenues perceived during the fourth quarter of the fiscal year.

After the end of the calendar year, national natural persons submit a yearly fiscal declaration based on example for:

- the revenues perceived during the year and taxable on the aggregate yearly tax base and the yearly tax base;

- the revenues taxable with patent tax under the Law on Local Taxes and Duties;

- the revenues perceived during the year from sources located abroad in respect of dividends, liquidation proceeds, supplemental voluntary insurance, voluntary health insurance and life insurance;

- shares held in companies, locations of economic activity, establishments and real estate situated abroad, as well as monetary loans granted and received.

Foreign natural persons submit yearly fiscal declaration only for the revenues perceived during the year and taxable on the aggregate yearly tax base and the yearly tax base, as well as the revenues taxable with patent tax under the Law on Local Taxes and Duties.

When completing their yearly fiscal declaration, the taxable natural persons have the right and the obligation to set off the sums of the advance tax payments made by them during the fiscal year against the final tax amount calculated in the declaration. The national natural persons have the right to set off also the final revenue tax paid in during the tax year as per Art.37 LTRNP.

When the calculated yearly amount of the revenue tax on revenues from employment activities is lower than the tax paid in advance, the employer is obliged, by 31 January of the next year, to reimburse the difference to the person concerned. In these cases, such person has a right of set-off between this reimbursed sum and any subsequent payments which they must make to the state budget for taxes on revenues from employment activities of themselves or other person(s) (Art.49(6) and (7) LTRNP).

Conclusion

In conclusion, it can be pointed out that set-off is a method widely used in practice for the discharge of financial obligations. Its application is conditional upon specific circumstances regulated by both the TSPC and the special laws (the LVAT, the LCIT and the LTRNP).

Set-off serves both a discharge and a security function. As a result of the discharge function, the financial legal relation is changed, due to one of the obligations, and any security interests undertaken in regard to such obligation, being both discharged. As from the moment of the discharge of the counter obligations, the accrual of interest on arrears stops as well, and the debtor is released from its obligation.

The security function is linked to the defence of public interests and serves as a guarantee against an eventual insolvency of the financial debtor.

The sole holder of the potestative legal right to perform set-off is the state. Therefore, such set-off right is exercised by the competent organs through a unilateral sovereign volition, even in the cases where the exercise thereof is performed on the initiative of the debtor. This method of discharge is hence applicable regardless of the debtor's will.

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Димитров П. Залік як засіб погашення публічних фінансових зобов'язання в Республіки Болгарія

Широковідомий монетарний характер фінансової заборгованості і зобов'язань надає можливість застосування юридичного інституту заліку також і в фінансовому праві. Розглядається вплив специфіки отрегульованих суспільних відносин і застосовуваного незалежного методу у фінансовому праві на вимоги і умови для використання заліку з метою сплати фінансової дебіторської заборгованісті і зобов'язань.

Проаналізовано загальна і спеціальна правові основи вимог і умов, при яких можливе погашення на основі заліку фінансових заборгованостей і зобов'язань. Розглянуто окремі гіпотези, в яких допущено залік фінансової заборгованості і зобов'язань державними органами, залік органом, в компетенції якого перебуває встановлення фінансового обов'язка, залік в процесі здійснення примусового виконання, а також залік фінансової заборгованості і зобов'язань в порядку спеціальних законів. Особливу увагу приділено акту, на основі якого здійснюється залік фінансової заборгованості і зобов'язань, а також компетентним органам видачі.

Ключові слова: залік фінансової заборгованості і зобов'язання, акт заліку, податок на додану вартість, податковий кредит, корпоративний податок, оподаткування фізичних осіб, оподаткування доходів.

Димитров П. Зачет как средство погашения публичных финансовых обязательства в Республики Болгария

Широко распространенный монетарный характер финансовой задолженности и обязательств предоставляет возможность применения юридического института зачета также и в финансовом праве. Рассматривается влияние специфики отрегулированных общественных отношений и применяемого независимого метода в финансовом праве на требования и условия для использования зачета в целях уплаты финансовой дебиторской задолженности и обязательств.

Проанализированы общая и специальная правовые основы требований и условий, при которых возможно погашение на основе зачета финансовых задолженностей и обязательств. Рассмотрены отдельные гипотезы, в которых допущен зачет финансовой задолженности и обязательств государственными органами, зачет органом, в компетенции которого находится установление финансовой обязанности, зачет в процессе осуществления принудительного выполнения, а также зачет финансовой задолженности и обязательств в порядке специальных законов. Особое внимание уделено акту, на основе которого осуществляется зачет финансовой задолженности и обязательств, а также компетентным органам выдачи.

Ключевые слова: зачет финансовой задолженности и обязательства, акт зачета, налог на добавленную стоимость, налоговый кредит, корпоративный налог, налогообложение физических лиц, налогообложение доходов.

Dimitrov P. V. Set-off as a Means for Extinguishing Financial (Public) Obligations in the Republic of Bulgaria

The widely spread monetary character of financial receivables and obligations allows the use of the legal concept of set-off in financial law as well. This article considers the influence of the specificities of regulated public relations and the sovereign method applied in financial law on the requirements and the conditions for the use of set-off for the purposes of the discharge of financial receivables and obligations.

This article analyses the general and the special legal framework regulating the requirements and the conditions for the use of set-off for the purposes of the discharge of financial receivables and obligations. It considers different cases where the set-off of financial receivables and obligations is allowed – set-off by revenue organs, set-off by the organ competent to determine the financial obligation, set-off during an enforcement procedure, as well set-off of financial receivables and obligations in accordance with certain special laws.

A particular attention is given to the sovereign act on the basis of which the set-off of financial receivables and obligations is performed – the set-off act, as well as the organs competent for its issuance.

Keywords: set-off of financial receivables and obligations, set-off act, value added tax, tax credit, corporation tax, taxable persons, revenue taxation.

Received by the editors: 13.10.2015
and final form 28.12.2015

UDC 336.7

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ASSESSMENT OF COMPETITIVENESS OF COMMERCIAL BANKS AND METHOD OF DETECTION COMPETITORS IN THE BANKING MARKET

In a market economy particularly important assessment of competitiveness of the bank, because the market there are banks who compete for engagement and resource allocation. Under these conditions, the effectiveness of the bank depends on its competitive position and competitiveness. The need to analyze the competitiveness of the bank there all participants entities involved in the banks: the Bank's clients, potential investors, the bank's shareholders, regulatory authorities, international financial institutions, the media, employees of the bank, the bank's competitors. The goal they all reveal the real financial condition, its degree of reliability and competitiveness. Of particular relevance is the question of assessing the competitiveness of banks in the financial crisis. All this makes the strategic orientation of banks to occupy the leading position in the competitive environment, as well as maintaining and improving its competitiveness.

Analysis of recent research and publications. Due to its exceptional urgency, the problem of research on the nature and characteristics of banking competition, as well as evaluating the competitiveness of banks, we found wide coverage in domestic and foreign literature. In particular, studies of this issue are engaged scientists as authors I. Andreev, N. Andrushkiv, W. Wolk, T. Hirchenko, G. Oleszczuk, F. Shpyg and others.

The issue of the competitiveness of the bank always pay attention to economists who study problems of the banking system. Great contribution to the development of structural analysis problems of competitiveness strategies such banks have foreign and domestic scientists: Porter, R. Fathutdynov, Yuri Zaruba, Alexander Kireev, Ivan Fomin, and others. With regard to the assessment of the competitiveness of commercial banks, they are much less studied (I. Voloshchuk, A. Dzyublyuk, A. Lavrushin, A. Galyts, Savluk M. et al.).

In the above-mentioned researchers it is revealed the nature and characteristics of banking competition, investigated the nature and modification of competitive relations in the modern banking market, examined main sources of competitive advantage of banks and their transformation. It is also investigated the question of the competitiveness of banks and their assessment, in particular - given the definition of the economic category, made efforts to offer its indicators and approaches to assessment. However, despite serious attention to issues of competitiveness among domestic banks as well as among foreign researchers, methodological bases its assessment remain undeveloped for a number of reasons. First, in the scientific literature there is no clear and consistent interpretation of economic categories "competitiveness bank", which should be based, on the one hand the basic provisions and fundamental ideology of modern theories of competition, on the other hand - take into account the fundamental principles of banks as specific financial a special type of institutions and transformation of the nature of banking competition in the modern world. In this regard, the literature is not as clear and well-established set of indicators that would allow the bank to evaluate the competitiveness and efficient methodological tools that have transformed the assessment of various parameters in a single scale and allow the calculation of certain integral index of competitiveness.

The formation of article's purposes. According to the identified gaps in scientific researches, the main purpose of this article is to justify a set of indicators of competitiveness of the bank and offer a method of evaluation, completing their practical testing.

The main material research. Today, to improve the competitiveness of commercial banks need to develop adequate methodological tools that can detect and critical competitive potential in areas of banks and on this basis to create a mechanism to improve their competitiveness.

In the scientific literature different methods are marked to assess the competitiveness of commercial banks. They are mainly based on the assessment of the techniques of commercial banks, primarily financial, or such important characteristics of its activities as stability and safety. These methods differ only sources of information, covering areas of banking and consideration of the environment, the type used indicators construction tools, technologies calculation (Fig. 1).

Many foreign banks use in conducting strategic research and analysis of competition intensity of competitive forces model of M. Porter, who believed that to achieve competitive advantage possible if both perform three tasks:

1. Improving the quality and consumer properties product.
2. Reducing costs and preserving the highest possible level of prices.
3. Aspect products to targeted market segments.

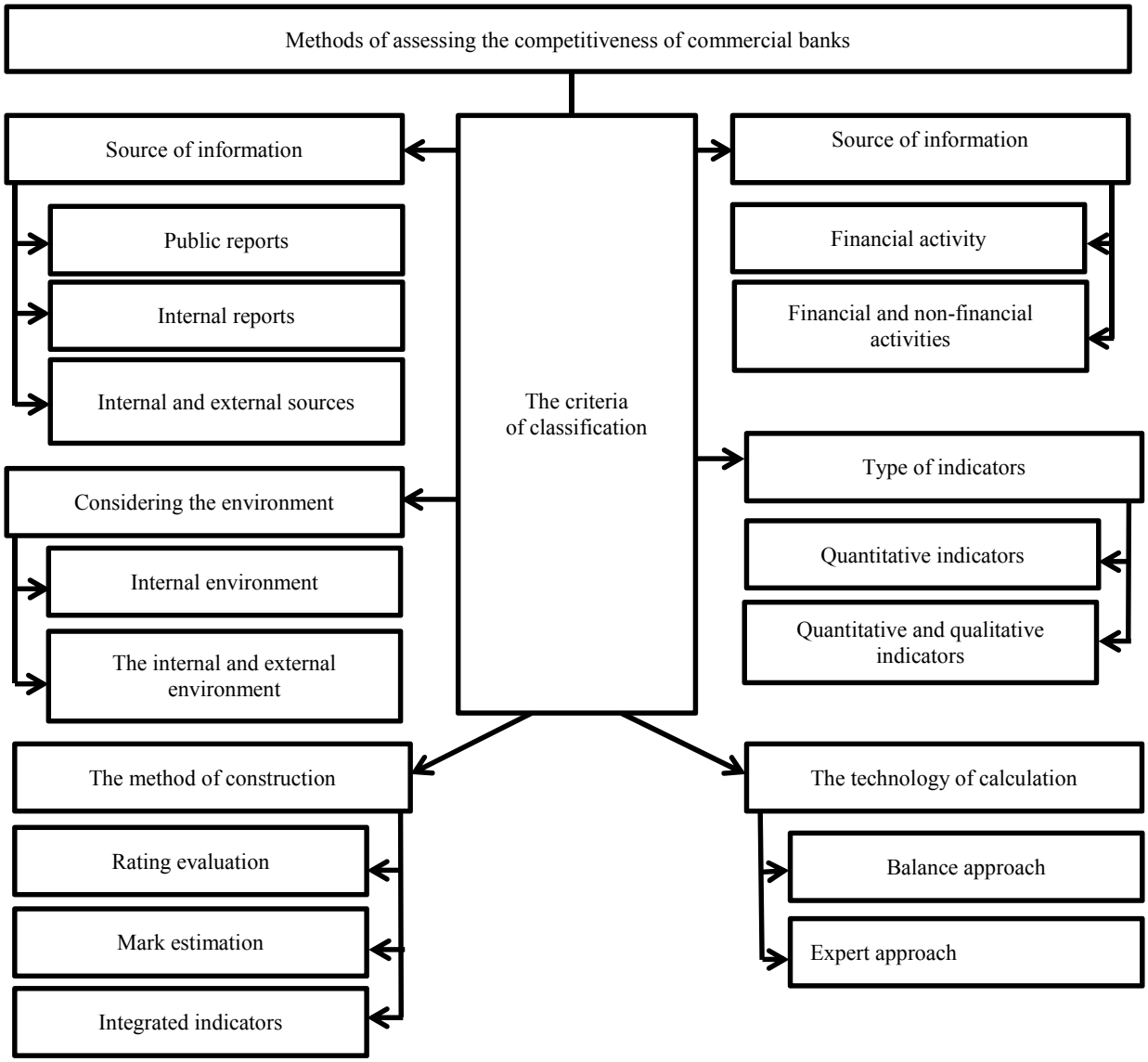

Fig. 1. Classification of methods for assessing the competitiveness of commercial banks

By the methods of assessment of commercial bank it is included known methodological development experts, banks, rating agencies, consulting companies - a system «CAMEL», methods of the Bank of England «RATE», rating agencies «Fitch», «Standart & Poor's», «Moody's», «Bank-rates», «MarkswebbRank & Report», consulting companies «BostonConsulting-Group», «FrankResearchGroup».

Also, there are many methods for assessing the competitiveness of commercial banks, which are developed by scientists and groups of experts under the leadership of V.Kromonov, A.V. Suvorov, D.K. Potapov and V.V.Yevstafyeva, A.G. Zaharyan, S.N. Kapustin and others.

Much of these methods is based only on the financial statements as a primary source of information on the activities of the bank and includes mainly quantitative. Thus, the method of estimating the significance of the banks, the proposed by A.V. Buzdalin, is based on attracting multi evaluation methods of banking, expressed set of indicators, including: the total value of assets; the total value of commitments; the total amount of bank's own funds; the volume of individuals' deposits; the size of the budget accounts.

We believe that in certain benefits (a lot of criteria, the relative ease of selection information), this method does not give a complete picture of the competitiveness of the bank as focuses only on financial side its activities and balance data is not taken into account of qualitative characteristics of banking, and among the quantitative parameters contains only absolute figures, which creates difficulties with interpretation differences when comparing banks, different size capacities, and eliminates the possibility of comparing the efficiency of use. In addition, the method does not take into account the problem of assessing the significance of the calculation pa-

rameters are ignored criteria such as asset quality, the level of risk, capital adequacy, etc.

Methods that are used by rating agencies and consulting companies tend to include not only financial indicators (capital adequacy, liquidity, asset quality, the structure of liabilities, risks and profitability), but the indexes of market position of the bank (image, market share, customer base, geographical structure, specialization) and quality of bank management that the overall lets you display both quantitative and qualitative characteristics of banking.

There are several methods for assessing the competitiveness of banks that implemented efforts to expand the approach to assess the competitiveness of commercial banks by taking into account its investment attractiveness, economic and non-economic factors, the totality of quantitative and qualitative characteristics of banking, consumer preferences, competitive banking services as part of the competitiveness of the bank and as part of the internal and external environment.

The method proposed by I.A. Nikonova and R.N. Shamhunov comes from recognizing the need to assess the competitiveness of commercial bank not only for banks, competitors and customers, but also for investors who are considering the competitiveness of the bank from the standpoint of its investment attractiveness. The methodology identified the twenty most important quality criteria for assessing the bank's corporate clients and individuals, including the level of confidence in the bank, qualified staff, the popularity of the bank, the quality of services provided, development of the branch network, the bank's compliance policy interests of the region and others.

The method is developed by I.N. Rykov and A.A. Chernyshev, to assess the competitiveness of the bank allocated two blocks of indicators characterizing its stability and consumer preferences. Block sustainability of indexes includes five sub-blocks, coefficients of reliability, liquidity, profitability, etc., which calculated on basis of point scale. The method also provides account external factors - parity of interest rates on the main types of services. Under certain benefits of the proposed methodological approach it differs significant limitations because it does not reflect any of algorithm and calculation of consumer preferences and environmental factors, not technology determining points for the stability factor, no way to combine all indicators into a single indicator that reflects the level of competitiveness commercial bank.

The method, which is proposed by I.A. Spitsyn and Ya.O. Spitsyn, differs from the above, firstly, the clear construction of criteria of competitiveness and composition used indicators. It involves a comparative analysis of banks competing for criteria such as absolute and relative market share trends of change, the relative profitability of banking, the relative quality and cost of services provided, the emergence of new services, the degree of concentration of the client base, relative capital intensity of bank . The overall levels of competitiveness of commercial banks, by the authors, based on the importance of peer review on meaning of indexes and bring them to a common point scale (50 points).

In our view, an undoubted advantage of method is assessment of the market share occupied by the bank in statics and dynamics, and quality characteristics of bank activity (quality of services provided), which, of course, adjust the results derived from the financial statements.

The competitiveness of banking services - an important component of the competitiveness of the bank - defines the importance of developing methodological tools for assessing the competitiveness of banking services. Appropriate methods are based on approaches that provide accounting:

• Qualitative parameters of banking services related to the performance characteristics of their sales;

• Segmentation models of distribution customer base;

• Consumer and economic characteristics of banking services based on the analytic hierarchy;

• Allocation product line with the analysis of feasibility of providing each service and tariff policy.

In some works methodological tools of assess the competitiveness of banking services built into the system for evaluating the overall level of competitiveness. So, Y.S. Kudasheva rightly observes that determine the competitiveness of services is one of the main parameters of the bank; while developing the method for assessing the competitiveness of the banking services author considers it is necessary to take into account the cost of banking services dependent on their quality, and conduct comparative description of the main banking activities of the bank and the key parameters of quality banking services.

Methods by Yu.Z. Kaidashev is based on calculation of the major internal and external performance of the commercial bank. Assessment of the internal environment of the bank is based on calculating the quality criteria of assets and liabilities, the bank's capital adequacy, profitability and profitability of its operations, the bank's image and competitiveness of services. Evaluation of the environment of the bank includes the criteria for the calculation of the state population, the real economy and the results of government regulation.

We believe that in the considered method it is combined qualitative and quantitative indicators, although a number of quantitative indicators developed to reflect the quality of the assets and liabilities, and capital adequacy, needs clarification (eg reserve ratio, defined as the ratio of reserve and loan debt , which is included of the indicators are not as assets and liabilities, and capital adequacy, etc.). The advantages of the technique include the account environmental factors of the bank. However, the proposed method of calculation shall be sub-

mitted not certain. If it is assumed that all banks competing in the same set of economic conditions, competitiveness is the ability of banks calculated under equal environmental conditions, the question arises: why do we need to consider the environmental criteria in an integral factor, because it does not affect the results of comparative analysis of competitiveness?

Of course, it seems that environmental factors account shall be determined by the choice of study. Thus, the analysis of the competitiveness of banks on a national scale is important to take into account regional differences in terms of (meso level), the scale of the global economy we should include in addition the analysis of characteristics due to specifics of the national economy (macro level). If we assess the relative competitiveness of regional banks at the regional level, the account regional conditions common to all banks in the region, does not affect the results of the integral calculation. Thus, the method involves a multi-purpose account environmental factor.

Overall analysis of methodologies of assesses the competitiveness of the banks that are presented in the economic literature, can identify a number of major disadvantages (Table. 1).

Table 1

The main disadvantages of methods for assessing the competitiveness of banks (Personal opinion of the author)

Disadvantage	Characteristic
Accounting for a limited number of factors	Most methods are based on internal information and does not take into account the state of the environment
Unrepresentative composition of parameters(indexes)	Several methods boils down to assessing only the quantitative characteristics of banking activity and does not reflect its quality indicators. Quantitative characteristics sometimes are just absolute terms that are less informative because of various complicating comparisons largest banks in the efficiency of their operation. In methods that include quality indicators that characterize not quantitative characteristics of the bank, these indicators are often unconsidered
Subjective character	Inclusion in the methods of qualitative indicators involves the use of peer review, which causes some degree of subjectivity. A similar situation arises when using the integrated competitiveness indicators of the bank when expert assessments are used to determine the significance of the contribution of private integral indicators
Static character	Methods that are based on the use of data at one period, to assess the current state of competitiveness of the bank, but do not reflect the dynamics of this state
Non-transparency	Closed nature of some methods does not allow understand how the calculation results of the assessment of competitiveness of banks
Limited of application	Methods based on confidential information cannot be applied by all market stakeholders

In connection with the above, the need to develop updated methodology for assessing the competitiveness of commercial banks, which could to some extent to eliminate. In our view, this method should reflect an understanding of the concept of ‘competitiveness of commercial banks' choice of subject and study accounting factors determining the competitiveness of the bank and the identification of indicators that characterize it.

According to author’s opinion competitiveness of commercial banks as integral characteristics of its operations, the bank's method of estimating the competitiveness involves the use of an integrated indicator that can be represented as a composition system of private criteria. The integral indicator, as opposed to private, provides a comprehensive picture of the competitiveness of the bank. At the same time the use of private indicators helps to identify the vast and critical position of the bank in certain areas of its operations, it is necessary for the formation mechanism of improving the competitiveness of the bank.

In our opinion the final integrated assessment should take into account important factors and criteria that shape the competitiveness of the bank, evaluation and display the main consolidated group settings. Thus, these criteria can be expressed by a number of quantitative and qualitative indicators that should the most correct and fully reflect the quantitative and qualitative characteristics of the competitiveness of the bank because of how performance adequately express the essence of the phenomena studied depends evaluation results.

We believe in establishing competitiveness indicators of the bank should proceed with their compliance with certain requirements, the most significant of which are:

1. Informative (complete and versatile display information about the contents of the object of study);
2. Reliability (accurate and objective reflection of the investigated processes);
3. Adequacy (adequately reflected the changes taking place with the object of research);
4. Specificity;
5. Optimality (choice of indicators to avoid excessive detail with sufficient breadth of content object of study and minimize the cost of collection, processing and use of data);

6. Dynamism;

7. Comparability (possibility of comparison on the subject and the object of study period, the calculation methodology);

8. Complementarity (matching task, each figure should be focused on measuring progress in addressing specific tasks);

9. Additive (the ability to aggregate);

10. The complexity (compatibility and complementarity of indicators reflecting the totality of characteristics of the object of study).

According to the author's methodology comparability of performance achieved by transferring their counterparts in quality and bringing the total base, determined in accordance with specified levels of competitiveness.

Qualitative analogues is calculated as follows:

$$u_i = \frac{(x_i - x_{min})(N-1)}{x_{max} - x_{min}} + 1 \qquad (1)$$

u_i – value analysis and quality of i-indicator of the competitiveness of the bank;

x_i – value of *i*-indicator competitiveness bank;

x_{max}, x_{min} – minimum and maximum values of i-indicator of competitiveness bank;

N – number of levels of competitiveness.

The number of target levels of competitiveness depends on the nature of the solving problem. In accordance with the objectives of our research, we have identified five levels of competitiveness:

- ✓ low;
- ✓ below average;
- ✓ average;
- ✓ above average;
- ✓ high.

Transformation of the rates in qualitative analogues is implemented by splitting the scale of values of each indicator on a number of intervals; thus the competitiveness index estimated the bank enters the interval, at the level of competitiveness in the adopted scale.

In this case the integrated indicator calculated by the formula:

$$Q_k = \sum_i (u_i * d_i) \qquad (2)$$

Q_k – total weighted assessment of the competitiveness of the bank;

u_i – value of quality analogue of *i*-indicator bank indicator of competitiveness;

d_i – factor of significance of *i*-indicator.

When grouping performance analog on the degree of their dependence on the influence of internal or external environment banks integrated assessment of the competitiveness of banks is the formula:

$$Q_k = \sum_i (u_i * d_{\text{вт}}) + \sum_j (u_j * d_{\text{вн}}) \qquad (3)$$

Q_k – total weighted assessment of the competitiveness of the bank;

u_i – values of analogue indicators, reflecting the impact of internal factors of competitiveness bank;

u_j – values of analogue indicators, reflecting the impact of external factors of competitiveness bank;

$d_{\text{вт}}$, $d_{\text{вн}}$ – significance of factors internal and external factors.

When you select groups of indicators of the competitiveness of private banks criteria, the formula for calculating the integral indicator can be presented as follows:

$$Q_k = \text{К}_\text{к} + \text{К}_\text{м} + \text{К}_\text{в}, \qquad (4)$$

Q_k – total weighted assessment of the competitiveness of the bank;

$\text{К}_\text{к}$ – important criterion competitive banking services;

$\text{К}_\text{м}$ – important criterion bank in the banking market;

$\text{К}_\text{в}$ – criterion value retention capabilities bank of its position in the market.

Since each of the partial criteria of competitiveness can be expressed by a number of indicators, the value of private criteria defined in turn as the sum of the values that characterize its performance analog weighted their importance and the integral index formula is as follows:

$$Q_k = \sum_i (u_i * d_i) + \sum_j (u_j * d_j) + \sum_k (u_k * d_k) \qquad (5)$$

Q_k – total weighted assessment of the competitiveness of the bank;

u_i – value of analogue indicators characterizing competitiveness criterion banking services;

u_j – values of analogue indicators that characterize the criterion of the bank in the market of banking services;

u_k – values of analogue indicators that characterize the possibility of retention criterion bank of its position in the market;

d_i, d_j, d_k – factors of significance indicators of the competitiveness of private banking criteria, local banks in the banking market and the possibility of the bank keeping its position in the market.

One of the important conditions is the correct choice of integrated assessment methods aggregation of indicators included in the basis of calculation. If the weights are determined arbitrarily, without sufficient theoretical or empirical evidence, the results of integrated assessment may be distorted.

The expert procedures are often used to determine the weights associated with a significant amount of time depends on the competence of the experts and is, as noted, subjective. To minimize the risk of subjective and incorrect assessments we propose to use to determine the relevance of indicators of competitiveness of banks methodological procedure based on the use of information entropy formula K.E. Shannon.

$$\text{H} = \sum_k p_k \log {}^1\!/_{p_k} \qquad (6)$$

H – amount of information;

p_k – probability K-events

This formula can be used to determine the spread of values for each indicator, if instead of using probability relative frequency of the random variable (evaluation) for each indicator will be used. Thus, all properties receive their value; while with changing characteristics over time and, accordingly, changing their significance used an approach would adequately reflect the changes taking place.

Based on the selection criteria of competitiveness base of commercial banks, the results of comparative analysis methodologies to assess competitiveness and taken account of the requirements for performance, we have identified the following groups of indicators characterizing the basic criteria of competitiveness of banks.

Table 2

Criteria and indicators of competitiveness of commercial banks

Criteria	Indicator	
	Quantitative	Qualitative
The competitiveness of banking services reflects the attractiveness of the service to the consumer compared to competing services, the ability of the bank to effectively use your business potential	The cost of banking services in the context of the main types of tariffs for services	The quality of banking services in terms of their basic types: the breadth of the range of services provided; consumer's properties of services; speed of service delivery; the level of customer service and culture; sold quality of service; forms of promotion services
The place of banks in the banking market - describes the significance of the bank, its position in the banking market compared to competitors	The share of net assets of the bank in the total value of the net assets of the banks in the region; the share of deposits of individuals in the total value of bank deposits of individuals in banks in the region; share of enterprises and organizations involved in the total value of bank funds of enterprises and organizations involved banks in the region; the share of bank loans to individuals in the total value of loans granted by banks to individuals in the region; the share of bank loans to companies and organizations in the total value of loans granted by banks to companies and organizations in the region	Persistence and by developed market positions: universal bank; key areas of activity; development of new activities of the bank; the duration of the financial market; a developed network of branches and representative offices; the degree of participation of the bank in socio-economic life of the region
The ability of banks to retain market position - defined business potential bank, consisting of distinguished financial and non-financial components	The financial component: assessment of capital share of capital in liabilities, capital adequacy ratio, the level of capital intensity; rating liabilities: the share of obligations in liabilities, the share of deposits of private entrepreneur in the commitments, the share of enterprises and organizations in commitments efficiency ratio of borrowed funds; valuation of assets: the share of loan debt ratio, the share of overdue loan debt in the total loan debt, the ratio of reserves to assets and the level of highly liquid assets, efficiency ratio of the assets; the liquidity of the bank: quick liquidity ratio, current ratio, the rate of long-term liquidity; yield and profitability: return on assets, return on assets, return on capital.	No financial component: assessment of the quality and impact of bank owners, transparency of ownership structure, the presence of regulatory owners; evaluation of the quality of corporate governance of the bank: the image of the head, the effectiveness of organizational management structure, the impact on holders of bank management, protection of minority shareholders, clients and partners; effectiveness and independence of operational management, professional top management, personnel policy, the effectiveness of risk management, the level of technical and technological equipment, the quality of the information policy; the availability of non-financial risks: the risk of ineffective strategies, reputation risk, the impact of significant changes

Apparently, to determine the competitiveness of commercial banks in the evaluation system includes all the important parameters of their activities.

Comparison of competitiveness of commercial banks (both quantitative and qualitative) provided by their counterparts in quality translation by formula (1). The resulting figures are placed in appropriate intervals of the scale, which includes five levels of competitiveness. Integral criteria of competitiveness and private commercial banks calculated taking into account the importance of indicators - qualitative counterparts, which are determined using the formula of information entropy.

Qualitative indicators are evaluated on a model that involves the use of a 100-point scale and method of "ideal bank" or "Happy competitor." Growth competitiveness is measured in the following way:

0-30 points - low level - bank outsiders that lose the competition, have competitive advantages and is uncompetitive in the banking market;

31-50 points - the level below average - weak banks are gradually losing competitive advantages and is unable to provide sufficient competitiveness;

51-70 points - average - banks followers with too few competitive advantages and do not have sufficient competitiveness;

71-90 points - above the average level - this level are trailing leaders banks that have sufficient competitive advantages and have potential for growth;

91-100 points - the highest level - this level with leading banks that have major competitive advantages and high level of competitiveness.

For practical assessment of competitiveness and determining the competitive advantages of commercial banks, using proprietary methods, we conducted research. The author chose to analyze group of leading Ukrainian banks, which operate on the regional banking market - in Zaporozhye. The structure of the estimated group of banks included such leading banks as PJSC «Privatbank», JSC «Oschadbank», PJSC «PUMB», PJSC «Alfa Bank», PJSC «Ukrsotsbank», PJSC «OTP – Bank». The choice of these banks in the subject of research is due to the fact that they are active in all segments of the banking market and take an active position in the regional market.

The resulting assessments that determine the competitiveness of an integrated banking market, taking into account all aspects of banking and sources of competitive advantage can be presented in a table 3.

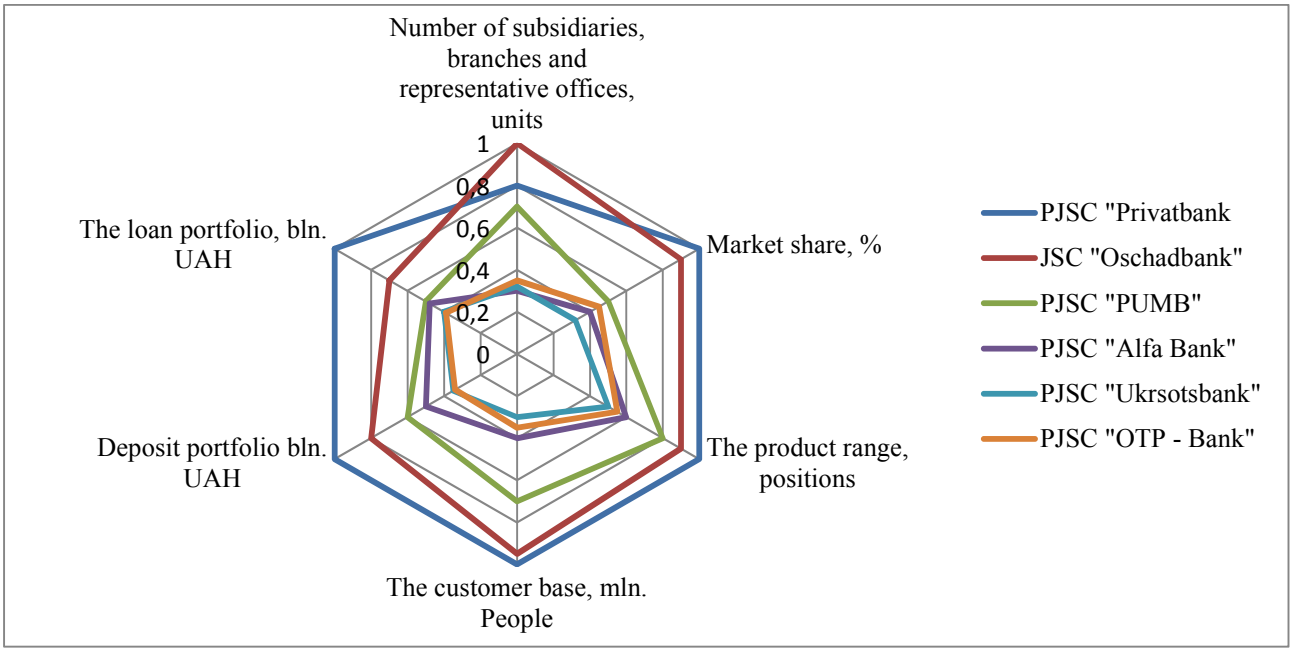

Fig. 2. Polygon competitiveness of banks in the banking market in Zaporizhzhya

Table 3

Integrated assessment of banks' competitiveness in the regional market of banking services in Zaporozhye

№	Bank	The competitiveness of banking services		The place of banks in the banking market		The ability of banks to retain market position		The overall indicator	
		Rating	Inter-pretation	Rating	Inter-pretation	Rating	Inter-pretation	Rating	Inter-pretation
1	PJSC "Privatbank"	91	Leader	95	Leader	91	Leader	92,33	Leader
2	JSC "Oschadbank"	72	Persecutor	91	Leader	96	Leader	86,33	Contender for leadership
3	PJSC "PUMB"	73	Persecutor	84	Persecutor	80	Persecutor	79	Persecutor
4	PJSC "Alfa Bank"	71	Persecutor	60	Follower	60	Follower	63,66	Follower
5	PJSC "Ukrsotsbank"	60	Follower	50	Weak bank	50	Weak bank	53,33	Weak bank
6	PJSC "OTP - Bank"	60	Follower	60	Follower	50	Weak bank	56,6	Follower

Conclusions. Practical application of the proposed technique has allowed banks to assess the competitiveness of the regional banking market in the city Zaporozhye. The estimation showed that the banking market in Zaporizhzhya undisputed leader is PJSC «Privatbank», which has sufficient competitive advantages in all areas and is able to significantly outpace its competitors. The main competitor of PJSC «Privatbank», to lead now is JSC «Oschadbank», primarily due to its high market activity, a wide coverage of the regional market distribution network, strong customer base and product line banking. However, lack of operational efficiency and deterioration recently integrated quality management reduce its level of competitiveness. Among the promising banks, which can then become active persecutors leaders is to provide first PJSC «PUMB» and

PJSC «OTP Bank». These banks are developing quite dynamically and effectively as they observed high levels of operating activity. The key to this is greatly effective management, prospective customer base and high quality work with clients. Also we noted that an important role in ensuring the overall competitiveness of the banks owned by the quality of banking services that is offered.

Consequently, the proposed feature of the author's technique is to use a combination of:

• methods of multidimensional comparative analysis that takes into account not only absolute levels of competitiveness of each bank, but the degree of approximation to the minimum and maximum values of other banks;

• methods of quality statistics to calculate quality indicators and their analogs positioning interval scale competitiveness;

• ways of aggregating indicators to measure the competitiveness of banks based on the concept of information entropy and formula of K.E. Shannon guaranteeing objectivity of determining the relative importance of these factors in the formation of integrated indicator.

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Дерев'янко О. В. Оцінка конкурентоспроможності комерційного банку та методика виявлення конкурентів на ринку банківських послуг

Статтю присвячено дослідженню методологічних та практичних проблем оцінки конкурентоспроможності банків на ринку банківських послуг. Досліджено методичні підходи до оцінки конкурентоспроможності комерційних банків, виявлено основні недоліки існуючих методик оцінки конкурентоспроможності банків. Розроблено методику оцінки конкурентоспроможності банку за допомогою інтегрального індикатора, який дозволяє отримати комплексне уявлення про конкурентоспроможність банку, сприяє виявленню як переважних, так і критичних позицій банку за окремими напрямами діяльності, що необхідно для формування механізму підвищення його конкурентоспроможності.

Ключові слова: індикатор, банківська конкуренція, конкурентоспроможність банку, конкурентні переваги банку, конкурентна позиція банку, інтегральна оцінка конкурентоспроможності.

Деревянко А. В. Оценка конкурентоспособности коммерческого банка и методика выявления конкурентов на рынке банковских услуг

Статья посвящена исследованию методологических и практических проблем оценки конкурентоспособности банков на рынке банковских услуг. Исследованы методические подходы к оценке конкурентоспособности коммерческих банков, выявлены основные недостатки существующих методик оценки конкурентоспособности банков. Разработана методика оценки конкурентоспособности банка с помощью интегрального индикатора, который позволяет получить комплексное представление о конкурентоспособности банка, способствует выявлению как преимущественных, так и критических позиций банка по отдельным направлениям деятельности, что необходимо для формирования механизма повышения его конкурентоспособности.

Ключевые слова: индикатор, банковская конкуренция, конкурентоспособность банка, конкурентные преимущества банка, конкурентная позиция банка, интегральная оценка конкурентоспособности.

Derevyanko A. V. Assessment of Competitiveness of Commercial Banks and Method of Detection Competitors in the Banking Market

The article is dedicated to the research of methodological and practical problems of assessing the competitiveness of banks in the banking market.

It was studied methodical approach to the evaluation of the competitiveness of commercial banks, found the main shortcomings of existing banks competitiveness evaluation methods. It was developed the method of valuation of bank competitiveness through integral indicator, which allows you to get a comprehensive picture of the competitiveness of the bank, helps to identify a pre-emptive, and the critical position of the bank on individual areas of activity that is necessary for the formation of mechanism of increasing its competitiveness.

Keywords: indicator, banking competition, the competitiveness of the bank, the bank's competitive edge, the competitive position of the bank, integrated assessment of competitiveness.

Received by the editors: 13.10.2015
and final form 28.12.2015

UDC 658.034:330.142.211.4

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NON-NEGOTIABLE ASSETS ACCOUNTING AND ANALYSIS OF THEIR STATUS

Setting the problem. Integration into international processes, of course, has an impact and leads to changes in the economic activity of the domestic enterprises. In Ukraine, a significant transformation of the accounting occurs in connection with the transition to national accounting provisions, based on the provisions of international accounting standards. Therefore, at the initial stages of this transition, there are some differences between the accounting practices and theoretical research. Regulation of accounting includes the basic rules on which the account of each individual enterprise is carried out.

With the increase in theoretical studies we observed a gradual harmonization at all levels of accounting transformation. However, for the improvement of accounting in Ukraine, which is based on new principles of the market economy, it is necessary to do a lot both in theoretical and in practical terms.

Non-negotiable assets are a critical element of enterprise management, in order to achieve commercial success and increasing the national state of the country they must be rational and efficient in use.

The analysis of recent research works. At present, the theory and methodology of accounting of fixed assets has been the subject of many works of domestic and foreign scientists: F.F. Butynets, I.T. Balabanov, L.P. Belih, F.F. Efimov, V.V. Grigoriev, M.J. Linnik, N.V. Kuzhelnaya, S.N. Maximov, N. Ordway, M.F. Ohiychuk, V.V. Sopko, L.K. Suk, V.G. Shvets et al. However, there are vey many the theoretical issues still to be thoroughly investigated. Issues of innovation in order to increase the energy efficiency of industrial enterprises, were investigated in the works of such scholars, like A.I. Amosha, O.N. Anisimova, V.P. Vishnevsky, S.N. Illyashenko, L.A. Zbarazskaya, Y.V. Kindzersky, A.A. Kataev, T.G. Logutova, R.A. Fatkhutdinov, L.I. Fedulova, Y.S. Shipulina, N.N. Yakubovsky etc.

Setting the problem. Improving the chart of accounts and the adoption of several amendments to the Tax Code does not solve fully the differences between the accounting and tax accounting of fixed assets. So, some question still remain, like modernization of plant and equipment, repair, reconstruction, which largely affect the original definition, residual or revalued, the liquidation value of fixed assets. In full, the same inconsistencies affect the accuracy of calculating depreciation and classifying the sum of the financial result of the costs.

The objective of the article is to investigate the legal framework, identify differences between the accounting and tax accounting of fixed assets, work out recommendations and proposals to eliminate them.

The main part. For effective implementation of the production process in the highly competitive domestic enterprises it is required to make quick decisions that are needed for efficient use of internal resources. Improving the efficiency of the industrial sector enterprises in many respects depends on adoption of sound operational and management decisions regarding methods of fixed assets management, such as fixed assets and intellectual capital of the enterprise. Of course, these figures are inextricably linked to investments in innovative processes. There is still an acute problem of renewal of fixed assets of an enterprises. For a prolonged period the sources of financing of capital investments and innovative transformations, are own funds. Political instability, an effective industrial policy, or rather its absence, military actions on the part of the territory, infringement of contractual relationship, reduction of industrial production has led to a catastrophic situation that the national economy is facing now. Figure 1 shows the degree of depreciation of fixed assets in the recent 15 years.

As can be seen from Fig. 1 the degree of depreciation of fixed assets reached 83.5% in 2014, i.e. nearly worn out, it is evident that it is difficult to create innovative products such obsolete facilities. But the high level of depreciation of fixed assets, which reached a critical level and that has a negative impact on the technical and economic status of the country, allows to arrive at an assumption that enterprises use the funds not for renewal of fixed capital funds, but for consumption of financial resources in the form of endless repairs. After all, according to the norms of the Tax Code of Ukraine p.146.12 "the sum of the costs associated with repair and improvement of fixed assets, including leased, not exceeding 10 per cent of the aggregate book value of all groups of fixed assets at the beginning of the year, relates to the cost of the tax reporting period in which such repairs and improvements were made" [2]. Expenses in excess of the carrying value of all groups of fixed assets at the beginning of the year, the carrying value of fixed assets of the groups and are subject to depreciation. As a result, it is very difficult to check whether the renovation, retrofitting or repair was made simply of fixed assets, thus increasing the costs of the period of report.

Of course, the professional, scientific and technical activities have a significant impact on the innovation potential of the industrial sector. The problem of renovation and modernization of facilities and equipment is

one of the most painful for the contemporary modern economy of Ukraine. Today the problem is that companies are not willing to seek technological modernization of production reserves, and in most cases, increase the profitability of production by raising the prices of their products. The solution is possible only by developing of a complex of complex measures, aimed at improving of the state's financial policy, one of the main areas of this improvement being depreciation policy. Enterprises resort to current and capital, it having no substantial influence upon these factors, the term of application of the main funds being extended, that is why application of straightforward method of depreciation, instead of accelerated ones would seem quite rational.

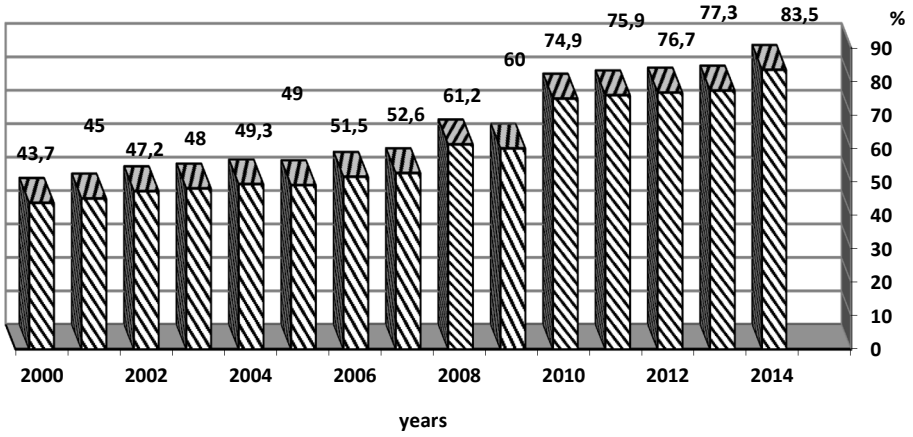

Fig. 1. The degree of depreciation for the period of 2000-2014 period
(Compiled by the author based on the data [1])

With regard to natural resources, (Article 114), according to some experts, this type of assets is subject to amortization, as natural resources are subject to depletion, but in this case it is necessary to consider the term right to use this property and use the income method of determining the value of the asset, as situation intangible assets and use the straight-line method of depreciation.

Studies assets classification reflects the need to combine the accounts 106 "Tools, appliances and equipment" and 112 "Low-value tangible assets" in one account as a low-value non-current assets and apply to those assets a methodology to allocate their cost - 50% during commissioning and 50% the final cancellation. This somewhat simplifies not only the classification of fixed assets, and depreciation charge of tools and equipment.

Analysis of statistical data on capital investments for the period 2010 – 2014 yy. reflecting a decline in funding. Research of structural changes shows that most of the capital investment was invested in tangible assets, most of them (31.4%) in machinery and equipment and only 3.4% in intangible assets.

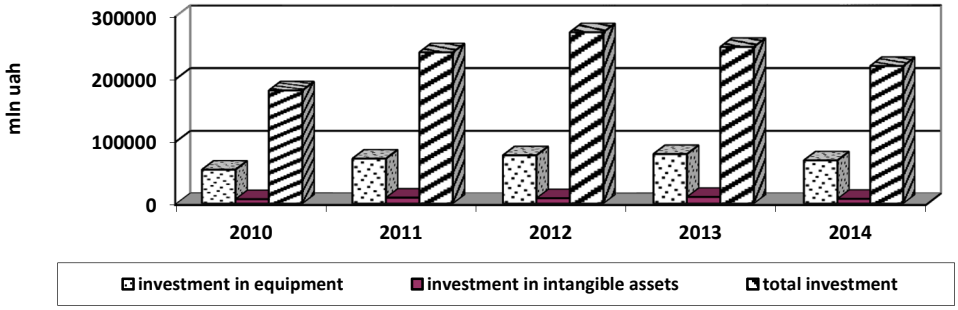

Fig.2. Capital investment by type of asset for the 2010-2014 period.
(Compiled by the author based on the data [1])

Let us analyze the sources of funding for capital investment. For a long period, the company has been carrying out modernization of their own funds.

The analysis of the figures for the period under review reflects the decline in funding from all sources. And it was the modernization of plant and equipment that required a significant investment. Indicators of innovative activity of industrial enterprises largely depend on the availability of financial resources and investment, and low technical and technological level of production and the use of outdated technologies, led to a decrease in the competitiveness of products, loss of markets, greater ecological pressures on the environment. Therefore accounting of creation, realization and owning of the objects of intellectual property and innovative production should be properly organized. A.P.Grinko proposes to account revenue, gained from realization of innovative production at the 706 analytical account, enti-

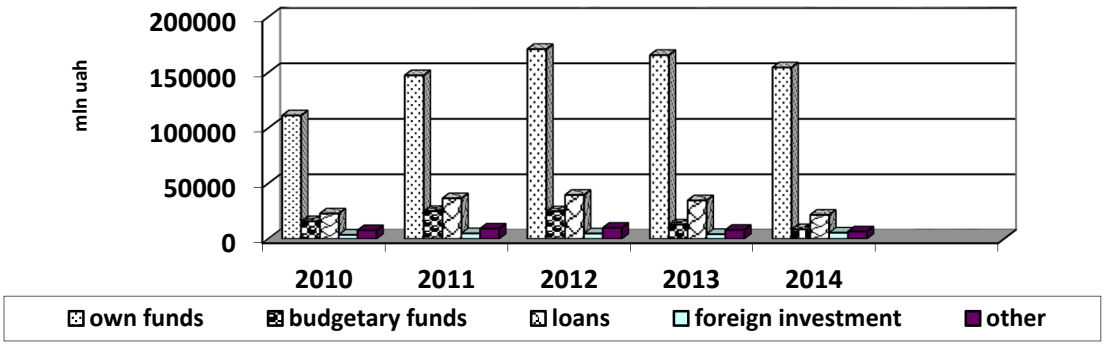

Fig. 3. Sources of capital investment funding for the period of 2010-2014
(Compiled by the author based on the data [1])

tled "Income, gained by realization of innovative production». It is advised to perform analytical accounting at this sub-account with regard to the types of sold innovative products and a separate analytical account for 793 sub-account "Financial results of other parts of activities" is to be used to reflect financial results of innovative, while for the results of investment activities subaccount 794 "Results of investment activities" could be appropriate [3]. Also, it seems reasonable to establish additional sub-accounts, reflecting formation of expenses on innovative developments, either at account 236 «Manufacturing of innovative products ", or at account 393 "Expenses of future periods on innovative developments", while for accounting of investments on modernization and reconstruction of the main funds subaccounts 156 "Capital modernization investments" can be presumed. Addition of these sub-accounts will make it possible to systemize the data of book-keeping, regarding the flow and reproduction of non-negotiable assets at an enterprise.

Conclusions. Implementation of the proposed recommendations is to allow to perform more thorough control, analysis and accounting of the state of non-negotiable assets as well as the results ,gained, by application, implementation and realization of innovative production at domestic industrial enterprises

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Бессонова С. І. Облік необоротних активів і аналіз їх стану

У статті проведено дослідження стану основних засобів в Україні. Розглянуто питання обліку основних засобів, їх модернізації, ремонту та амортизації. Запропоновано рекомендації щодо уточнення класифікації основних засобів, деталізації обліку, контролю і аналізу стану необоротних активів, а також результатів використання інноваційної продукції.

Ключові слова: необоротні активи, основні засоби, амортизація, амортизаційна політика, інновації, облік.

Бессонова С. И. Учет необоротных активов и анализ их состояния

В статье проведены исследования состояния основных средств в Украине. Рассмотрены вопросы учета основных средств, их модернизации, ремонта и амортизации. Предложены рекомендации по уточнению классификации основных средств, детализации учета, контроля и анализа состояния необоротных активов, а также результатов использования инновационной продукции.

Ключевые слова: необоротные активы, основные средства, амортизация, амортизационная политика, инновации, учет.

Bessonova S. I. Non-Negotiable Assets Accounting and Analysis of their Status

In the article studied were the status of fixed assets in Ukraine. The problems of fixed assets, their modernization, repairs and depreciation. Recommendations were given with the objective of clarification of the classification of fixed assets, detailed accounting, control and analysis of non-current assets, as well as the results of the use of innovative products.

Keywords: non-negotiable assets, fixed assets, depreciation, amortization policy, innovation, accounting.

Received by the editors: 27.11.2015
and final form 28.12.2015

UDC 336.225.67

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THE USE OF TYPOLOGICAL RESEARCH IN THE SYSTEM OF INTERNAL FINANCIAL MONITORING

Statement of the problem. In the process of combating the legalization of income from crime in Ukraine, the clear definition of the range and criteria for the identification of operations, which are to be under financial monitoring, as well as mechanisms for transmission of transaction's data, remains on the agenda, because this is the basis for the effective functioning of the system for prevention the laundering of "dirty" income and financing the terrorism.

According to the article 4 of the Law of Ukraine "On prevention and counteraction of legalization (laundering) of income from crime, financing of terrorism and financing of proliferation of weapons of mass destruction" [1], the financial monitoring consists of two levels:

1) mandatory financial monitoring is a set of measures of the specifically authorized body of the Executive authority for financial monitoring of information analyses regarding financial transactions that is provided by the subjects of primary financial monitoring, as well as set of measures to check such information in accordance with the legislation of Ukraine;

2) internal financial monitoring is the activity of subjects of primary financial monitoring on detecting the financial transactions that are to be under mandatory financial monitoring, and other financial transactions that may be associated with the legalization (laundering) of income.

Peculiarity of features of internal financial monitoring, as well as specifics of accounting the financial operations stipulates the detection of such operations mostly at visual monitoring.

Visual monitoring of conditions of financial transactions in order to identify those, which can be attributed to internal financial monitoring, especially at a large number of transactions, requires adequate qualification of the employees who are responsible for the detection of such operations, constant staff training and time consuming for further thorough analysis regarding the relationship of transactions with money laundering.

There are no foreseen limitations for the organization of internal financial monitoring and the financial institution independently determines the threshold amounts of financial operations and the additional criteria to identify them as doubtful, that creates a field for abuses by not only persons who intend to legalize criminal profits, but also for personnel, owners and management of the financial institution.

Analysis of recent studies and publications. Problems and prospects of development of the national system of financial monitoring and its components in Ukraine, have found its reflection in the works of many scientists, namely: N.Y. Dondyk [3], O.Iy. Zhabyntsy [4], V.V. Kovalenko [5], I.V. Kolomiets [6], O.O. Kurishko [7], T.V. Volkovynska [9], and others.

But despite the considerable amount of theoretical and practical developments, a large number of issues in terms of mechanisms and criteria for the definition of illegal financial operations, remain unsolved and require further study.

The purpose of the said article is the research of separate means of internal financial monitoring and determination of typologies which should be used in financial institutions in accordance with the recommendations of international organizations.

Summary of the basic material. Article 16 of the Law "On preventing and counteracting the legalization (laundering) of income received by criminal way, financing of terrorism and the financing of proliferation of weapons of mass destruction" [1], specifies that the financial transaction is to be under internal financial monitoring, if the entity of primary financial monitoring has suspicion, based, in particular, on:

- risk criteria defined by the entity of primary financial monitoring on its own, taking into account the risk criteria established by the central body of the Executive power, which is in charge of the formation and implementation of the State policy in the field of preventing and counteracting the legalization (laundering) of income or financing of terrorism;

- established fact (facts), according to the results of the performed analysis, which prove the inconsistencies of financial operation (operations) to the financial status and/or the content of the activity of the client;

- typological researches in the sphere of counteraction to legalization (laundering) of income received by criminal way, or financing of terrorism, or financing of proliferation of weapons of mass destruction, which have been prepared and published by the specifically authorized body;

- it should be noted, that there is absence of identified methods of studying the operations, which have features of the internal financial monitoring in order to obtain the confidence or motivated suspicion in their connection with the laundering of funds. This is especially related to those banks, or to their structural units,

where there are no employees in charge and who are relieved from other duties save financial monitoring.

It is not always possible to determine the list of documents and statements, on the basis of which, we can draw a definite conclusion regarding the connection of the operations with money laundering.

Despite the presence of the risk Criteria for legalization (laundering) of income from crime or financing of terrorism, which have been approved by the State Decree on financial monitoring in Ukrainedt. 03.08.2010 N 126, most provisions remain non-formalized and unidentified [2].

It is necessary to have a clearer definition of the use of typological researches in the sphere of counteraction to legalization (laundering) of income or financing of terrorism or financing of proliferation of weapons of mass destruction, which have been prepared and published by the specifically authorized institution.

The State financial monitoring service recommends information sources that include the typologies of international organizations that operate in the field of combating the legalization of income (money laundering).

A key role in creating the international standards for combating the legalization of criminal income and financing of terrorism is given to Financial Action Task Force on Money Laundering (FATF).

FATF is an independent intergovernmental organization that develops and promotes its principles for the protection of the world's financial system from the threats of money laundering, financing of terrorism and the financing of proliferation of weapons of mass destruction. The recommendations of the FATF are generally recognized international standards to combat money laundering and the financing of terrorism.

FATF was created in 1989 by the decision of the countries of the "Great Seven". FATF consists of 34 countries and 2 regional organizations. The main means of FATF are the International standards to combat money laundering, financing of terrorism and the proliferation of weapons of mass destruction. Compliance with these standards allows countries to build an effective system Policy To Combat Money Laundering, PTCML/Financing of Terrorism, FT, and protect the national economy from the shadow capital.

According to the UN Security Council Resolution 1617, FATF Recommendations are mandatory for the use by the countries that are members of the United Nations.

For the spreading of international standards in countries that are not included in the FATF, 8 regional groups have been established according to its type:

- The Eurasia Group on money laundering (EAG);
- Asian-Pacific group to combat money laundering (APG);
- Group to combat money laundering in Eastern and Southern Africa (ESAG);
- Group of development of financial measures to combat money-laundering in South America (SAG);
- Group for the development of financial measures to combat money laundering in the Middle East and North Africa (MENAFATF);
- The Committee of experts of the Council of Europe to evaluate the measures to combat money laundering and financing of terrorism (CECEFATF);
- Caribbean Group for the development of financial measures to combat money laundering (CGFATF);
- The Intergovernmental Group to combat money laundering in West Africa (IGWAFATF).

One of the largest is ÊAG-the Eurasian Group to combat the legalization of criminal income and financing of terrorism. By the decision of the Constituent Conference of EAG, Ukraine has joined the Member States-observers of the said Group since October 2004.

In February 2005, EAG has gained the observer status in the FATF. From June 2010 the Eurasian Group is an associate member of FATF.

In this regard, the entities of primary financial monitoring may use references to information sources that contain the classification and Recommendations of such international organizations as the Eurasian Group to combat the legalization of criminal income and financing of terrorism (GAE) and Group to develop financial measures to combat money-laundering (FATF).

FATF recommendations establish comprehensive and consistent structure of measures that countries should apply to combat money laundering and financing of terrorism, as well as the financing of proliferation of weapons of mass destruction. The countries have different legal, administrative and operational structures and different financial systems, and therebycannot take identical measures to counter these threats. That is why, countries need to adapt recommendations of the FATF, which determine the international standards, to their specific conditions. The recommendations determine the necessary measures, which countries should have in order to:

- identify risks, develop policy and coordination within the country;
- to pursue money laundering, financing of terrorism and the financing of proliferation of weapons of mass destruction;
- to apply preventive measures for the financial sector and other established sectors;
- to determine the authority and responsibility of the competent authorities (e.g., investigators, law-enforcement and supervisory bodies) and other institutional measures;
- to strengthen the transparency and accessibility of information about the benefits of the recipient of property of juridical persons and entities;
- to ensure the international cooperation.

FATF standards include the named Recommendations and Explanatory notes [12], together with the rele-

vant definitions in the Dictionary. The measures which are set out in the FATF Standards, must be applied by all FATF members and applying them is to be rigorously assessed through processes of mutual grades and through processes of estimates of the International Monetary Fund and the World Bank on the basis of a general methodology for assessment used by FATF.

Some Explanatory notes and definitions include examples that illustrate the possible application of the requirements. These examples are non-binding elements of the FATF Standards and are included only as a clarification. The examples are not intended to be comprehensive and although they are considered as useful indicators, they may not be suitable to all circumstances.

The recommendations contain 40 standards, which are grouped as follows:

A – Policy To Combat Money Laundering, PTCML/Financing of Terrorism, FT, and coordination;

B – Money laundering and confiscation;

C – Financing of terrorism and the proliferation of weapons of mass destruction;

D – Preventive measures;

F – Powers and obligations of competent authorities and other institutional measures;

G – International cooperation.

For Ukraine, the greatest interest are typological researches of EAG, because according to the Recommendations, they conduct research of typologies (the most common schemes) of legalization of criminal in come and financing of terrorism, which are characteristic for the Eurasian region. The results of typological researches allow to identify the most highly risky zone sand sectors, to build an effective methodology for risk management.

Priority research themes for the region typologies are determined by the participants of the Plenary meetings of EAG. Eurasian Group broadens the research findings to law enforcement and supervisory bodies as well as to private sector institutions.

Latest typological researches of this organization are:

- "Money laundering through the securities market" (2013);

- "Legalization of criminal income and financing of terrorism with the use of cash and monetary means" (2012);

- "Study of possible directions for improving the interaction between financial intelligence units of the ÊAG countries to combat the activities of terrorist organizations, that operate in the Eurasian region, and which are not included in the international list of terrorist organizations" (2012);

- "Preventing crime in the field of State procurement" (Russia).

Reports on typological research of FATF can also be useful for organizing the internal monitoring by financial institutions:

"Leadership of FATF regarding the application of risk-oriented approach for prepaid cards, mobile payments and online payments (2013)".

"International advanced experience-Targeted financial sanctions related to terrorism and the financing of terrorism"(Recommendation 6) (2013).

"Leadership of FATF on financial investigations: operational issues" (June 2012)

"Specific risk factors related to the legalization (laundering) of income from corruption" (June 2012)

"Laundering of income from corruption" (2011)

"New methods of payments"(September 2010).

Let's consider the possibility of using typologies in the organization of domestic monitoring, for example, which is stated in the Typological report GAE "Money laundering through the securities market" (July 2013) [11].

Actual for Ukrainian banks is the use of typologies when conducting internal financial monitoring, mentioned in the materials of the 17th Plenary session of the GAE "Legalization of criminal income and financing of terrorist activity with the use of cash and monetary means" (Delhi, 2012) [13].

According to data, received in the course of the research, most Member States feature the growth of the cash money turnover. The increasing requirements of the economy in money, in connection with the growth of GDP, the increase of prices or due to other reasons, cause the need for an appropriate in crease of money, offered by banks. However, it is worth noting, that the in crease in the volume of cash turnover increases risks of their use in criminal purposes.

The main factors that stimulate the use of cash are:

- availability of financial means, such as bills, travellers cheques, bearers hares, bank checks that allow to receive payments in cash;

- the existence of a shadow economy;

- low degree of the use of non-cash payments by the individuals to pay for the goods and services;

- unofficial income of population which is received and stored in cash.

The increased use of cash when performing calculations, as well as when keeping the economic activity, contributes to the following negative consequences:

- reduction of funds to the State budget in connection with reduction of taxation base;

- change in the structure of money supply of the State in favor of cash, which greatly complicates planning and regulation of processes in the economy of the country, and as a result, is undermining the economic stability and social welfare of the State;

- promotes the growth of the shadow economy and the development of gray market because the control of cash is considerably complicated;

- contributes to the increase of the risk of illegal "centers" for financing of extremist and terrorist activity, which in turn, creates a threat to public safety.

Subject study 8: Ukraine
Type of study: Illegal cashing of funds
Brief information about the incident
It was noted, that the group of companies was debiting funds in the amount of 37.3 million UAH for the payment of bills to the securities' dealer (citizen B). The funds have been debited in the course of 4 months in 2010 for their illegal cashing. Citizen B had transferred funds in the amount of 37.3 million UAH to the citizen A for payment of shares issued by the company X . Funds have been debited on the day of receipt of money or on the next day. Citizen A had received funds in the amount of 37.3 million UAH on the day of receipt of money or on the next day.
Analysis of documents showed that: 1. Citizen A is unemployed and does not receive income from her main work. 2. X-a construction company. In the public domain there is no data about the company X, about construction sites, equipment an do the cash assets necessary for the construction, about sale of real estate which has been built,etc. Securities, according to which the citizen U had transferred loan funds in fa vour of the citizen A, were bills, and not shares. The shares issued by the company X, had the evidence of fictitious nature. Thus, the price of 1 share amounted to UAH 4.3 and exceeded their nominal value by more than 4 times. The total value of all shares issued by the company X is 1 billion 160 million hryvnas. However, from the point of view of stagnation in the Ukrainian construction market and lack of information about the activities of the company X, it was obvious, that the value of the shares had been exceeded. The described scheme has been used for the illegal cashing of money.
Evidence of suspicious transactions: 1. Citizen A is unemployed and does not receive income from her work . 2. X is a construction company. In the public domain there is no data about the company X, construction sites, equipment and other funds necessary for the construction, sale of housing estate.
Measures taken: Security service of Ukraine conducts the investigation.

From the point of the threats associated with the turnover of cash, countries must conduct a consistent and tough policy to combat money laundering/financing of terrorism (PCML/FT), on a systematic basis to optimize the national legislation, which regulates the cash flow and monetary means, and must be guided by the experience in part of PCML/FTby specialized international organizations and supranational associations.

According to the analysis of information received from the countries that took part in the research , we can state, that in order to regulate the turnover of cash and monetary instruments in the Russian Federation, the Republic of Belarus, Uzbekistan, Ukraine, Armenia and Kirgizia, Kazakhstan, Turkey, Serbia, the specialized laws which govern the turnover of above mentioned risk instruments are in force.

In the framework of implementation of necessary measures to combat the legalization of criminal income and financing terrorism, the following systems have been developed and used at the State level:

- systems of identification of clients-entities and individuals that carry out the financial transactions in cash. Identification of individuals provides for the following in formation: surname, name, patronymic, documents confirming the identity (for resident and non-resident citizens – passport data for state less persons and refugees - residential information, migration cards), the address of the place of residence or place of staying;

- identification of legal entities provides for the identification of the organization's name, legal form of organization (OJSC, CJSC, PE, etc.), the taxpayer's identification number, the place of registration and place of actual whereabouts;

- criteria for suspicion and threshold values according to which the assessment of the financial operations in terms of PCML/FT is to be performed.

Based on the available materials, namely on the practice of Belarus, Russia and Ukraine, we can cite several examples of the use of cash funds and financial means and instruments in unlawful activities and we can identify the evidence of such suspicious transactions.

According to the representatives' opinion of the State financial monitoring of Ukraine, the characteristic evidence of suspicious financial operations with cash and monetary instruments are:

1) purchase and sale of cheques, traveller's cheques or other similar payment means for cash;

2) debiting of funds on the accounts in cash with their subsequent transfer to another person on the same or on the next day;

3) performing the financial transactions with securities bearer, which are not deposited in depository institutions;

4) performing the financial transactions with bills, endorsement in blank or endorsement to the bearer;

5) confusing or unusual nature of financial transaction or the aggregate of interrelated financial transactions which have no apparent economic sense or obvious legal purpose;

6) mismatch of financial transaction in the nature and the content of the client's activity;

7) regular performed transactions by a person to exchange the banknotes of small denomination, especially in foreign currency to the banknotes of big denomination;

8) substantial increase of the balance on the account of the legal entity or natural person-entrepreneur which is not related to the activity and which is used for the purchase of bearer securities;

9) regular submission of checks issued by the bank non-resident and endorsed by non-resident bank for encashment, if such activity does not correspond to the activities of the legal entity or physical person-entrepreneur who is known to the entity of primary financial monitoring, and others.

Financial intelligence unit (FIU) of Ukraine presented the following examples of schemes with the withdrawal of funds into the shadow turnover through cash transfer.

Example 1. Credit agreements.

Two insurance companies which have a common constituent composition, use a scheme of quick movement of a significant amount of money (with a difference of a few minutes) with the purpose of transferring credit funds as securities payment with the evidence of "being fictious" to the account of a common counterparty LLC "A" with further conversion of cash less funds in to cash through an individual "A".

So, for one day, the insurance company "A" and the insurance company "B" by the end of a trading day received at 18 h. 50 min. credit funds from the bank in the amount of 50 million UAH each. At once, these funds were transferred as payment for bills with nominal endorsement to the account of LLC "A". LLC "A", in turn, at 19 h. 01 min, the received funds in the amount of 100 million UAH, were transferred to the account of an individual "A".

Henceforth, the cash was withdrawn by the individual "A" at 19 h. 25 min. It was also established that the issuer of the Bills had the evidence of being fictitious. The person "B" was the founder of insurance company "A", the insurance company"B", as well as the insurance company "A" were involved in the scheme which had been related to the fraud schemes on the real estate market.

Example 2.Deposits.

The citizens "A" and "B" deposited on their accounts more than 20 mln. UAH in one banking institution. On the same day, the citizens "C" and "D" received credit funds in cash in the same banking institution in the amounts of 20 mln. USD each. These funds were deposited by the citizens "C" and "D" in cash as early repayment for the credit on the same day.

The citizens "A" and "B" on the same day received each 20 mln. UAH in cash as early repayment of the deposit. Citizen "A", as according to the Ministry of Internal Affairs of Ukraine, was listed as the person who was in prison. Citizen "B" had previously committed offenses related to the trafficking of drugs.

Citizens "C" and "D" were associated parties (cofounders of 2 companies).

Example 3.Cross-border transactions.

Non-resident company on the territory of Ukraine performed the conversion of foreign currency via Ukrainian enterprise, money was later withdrawn in cash. The agreement had been concluded between LLC "G" (Ukraine) and company "A" (New Zealand) for the amount of 100.0 mln. Euro for free financial aid.

In the course of a certain period of time, on the account of LLC "G" from the company "A" the funds in the amount of 74.9 million Euro and 27.5 million USD (1.0 billion USD) had been debited. The part of the mentioned funds was immediately converted into the national currency and was withdrawn in cash by the citizen «B» (he is director of LLC "G") via cash register at the banking institution to purchase agricultural products worth of 77.4 million USD.

It has been established, that in terms of a citizen "B", he was charged by the law enforcement bodies for illegal production, manufacture, acquisition, storage, transportation or forwarding narcotic drugs, psychotropic substances or their analogues without purpose of distribution.

The said citizen was declared by the State as wanted on suspicion of burglary. In the framework of the investigation, information from New Zealand financial intelligence unit was received, and it was established that the source of origin of funds on the accounts of the company "A" were the funds of non-resident companies, the accounts of which have been opened by the citizens of Ukraine consistently within ten days. Registration agent of the company "A", the company "C", is under suspicion of activities on registration of companies-shells (short term companies).

Summarizing the consideration of examples of possible schemes on money laundering from criminal income, using cash and financial instruments, it should be noted, that factors, that contribute to the emergence of risks of laundering of income by using the given means are:

- insufficient quality of internal control procedures in the banks and non-banking financial organizations;
- insufficient banks' and non-banking financial institutions' awareness about unscrupulous clients, who have been identified in the course of implementation of internal control (as a result of above mentioned causes);

- the presence of gaps in the existing profile legislations, that make it possible to use cash and monetary means in criminal purposes.

Control system, that is implemented in any financial sector, is individual and unique in each country. Sufficiency of adopted measures is determined independently by each country and is based on current practices, economic, geographical, historical and other peculiarities of the country.

However, for the purpose of exclusion or prevention of appearance of such schemes, may be, it is necessary to analyze the legislation of the country, it is necessary to assess the efficiency of measures to be taken, the effectiveness of control mechanisms , and, if necessary, to consider the possibility of their changes and additions, taking into account new recommendations of FATF.

In addition, it is necessary to pay particular attention to the fact, that a very effective tool, in terms of identifying and clarifying areas of risk in different spheres, is the formation of a permanent partnership with the private sector.

As a separate measure, it is offered to consider the possible amendments to the relevant legislation, which regulate the circulation of cash and monetary instruments, which will enable to:

- reduce to conditionally safe level the maximum possible limit of cash withdrawals by individual entrepreneurs and legal entities;

- introduce the obligation to pay income tax by legal entities and individual entrepreneurs when withdrawing cash which exceeds the permissible limit;

- set mandatory identification of individuals who repay money to the bearer, set limits on repayment of monetary means to bearer;

- limit the payments between legal entities, as well as between legal entities and individuals with the use of cash.

Thus, the process of creating an effective system of internal financial monitoring with the help of typological research:

- must be directed not only to document the facts of legalization, but also to the disclosure of economic crimes;

- it is necessary to work out such a course of development of internal financial monitoring, which would meet the requirements of specialized international institutions in the field of prevention and counteraction of legalization (money laundering) of the income from crime, and would create conditions for further effective functioning of the national economy;

- will require the improvement of the legislative framework in the field of prevention and counteraction of legalization (money laundering) of income from crime and the formalization of its criteria.

Conclusions. Research of typologies for the legalization of criminal income and financing of terrorism, should be aimed at improving the efficiency of detection of crimes by employees of law enforcement and supervisory bodies, as well as, by the employees of private sector organizations.

Study of typology will promote more effective detecting of attempts of money laundering and the financing of terrorism, as well as, the termination of the facts of committing such crimes and other types of crimes, that are predicative in relation to money laundering, based herewith on the best international experience in this sphere.

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Акімова О. В. Використання типологічних досліджень в системі внутрішнього фінансового моніторингу

В статті розглянуті можливості використання провідного досвіду у сфері протидії та запобігання легалізації доходів, отриманих злочинним шляхом, національною системою фінансового моніторингу України за допомогою типологічних досліджень, які розробляються міжнародними організаціями, перш за все, такими як Група розробки фінансових заходів боротьби з відмиванням грошей – ФАТФ (FATF) та її регіональною Євразійською групою – ЄАГ (EAG). Використання типологій дозволяє оперативно реагувати на незаконні фінансові операції і виявляти додаткові критерії віднесення їх до сумнівних.

Ключові слова: фінансовий моніторинг, типологічне дослідження, фінансування тероризму, легалізація злочинних доходів, критерії підозрілості, протидія правопорушенням.

Акимова Е. В. Использование типологических исследований в системе внутреннего финансового мониторинга

В статье рассмотрены возможности использования ведущего опыта в сфере противодействия и предотвращения легализации доходов, полученных преступным путем, национальной системой финансового мониторинга Украины с помощью типологических исследований, которые разрабатываются международными организациями, прежде всего, такими как Группа разработки финансовых мероприятий борьбы с отмыванием денег – ФАТФ (FATF) и ее региональной евразийской группой – ЕАГ (EAG). Использование типологий позволяет оперативно реагировать на незаконные финансовые операции и обнаруживать дополнительные критерии отнесения их к сомнительным.

Ключевые слова: финансовый мониторинг, типологическое исследование, финансирование терроризма, легализация преступных доходов, критерии подозрительности, противодействие правонарушениям.

Akimova O. V. The Use of Typological Research in the System of Internal Financial Monitoring

The article considers the possibility of using the advanced experience in the sphere of combating and prevention the legalization of income obtained from crime by the national system of financial monitoring of Ukraine with the help of typological studies, which are being developed by the international organizations, first of all, such as the Financial Action Task Force on Money Laundering (FATF), and its regional Eurasian Group (EAG). The use of typologies allows to respond promptly to illegal financial operations and identify the additional criteria of classifying them to the category of dubious.

Keywords: financial monitoring, typological studies, financing of terrorism, legalization of criminal income, criteria for suspicion, preventing crime.

Received by the editors: 30.11.2015
and final form 28.12.2015

UDC 336.01:338.1

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FINANCIAL CYCLES NATURE AND ITS ROLE IN THE CRISIS PROCESSES DEVELOPMENT

The current economic situation is marked by an increase in dynamic operating conditions, high level of uncertainty, a significant complication of business processes. The recent financial crisis has found the failure of the financial sector to resist the negative tendencies.

Characteristics of the present stage of socio-economic development determine the formation of the new requirements in the theoretical understanding of cyclical development problems and financial crises. A wide range of scientific papers on the subject show a steady interest in it by representatives of almost all economic flows. Such interest presupposes a careful study and assessment of the existing research capacity in the context of the stability of the problems increase economic system dynamics and its financial architecture, aggravated under the influence of the recent financial and economic crisis.

Thus, the global financial crisis of 2007-2008 identified the need for financial stability analysis and causes of financial crises. In this context, on the first place macro-prudential policy, the main objective of which is to maintain financial stability. The recent experience of the country's euro zone stress, in the broader context of the global financial crisis, illustrates the systemic risk inherent in the build-up phase and correction ebullient financial cycles. Note that the possibility of imposing cycles different duration, scale and areas existence considerably complicates their differentiation and identification structural interaction mechanisms.

For a long stage of economic thought development financial factors of economic instability only occasionally appeared in the center researchers' attention. It should be noted that financial cycles are less studied than their counterparts of the business cycle, although recent research in this field are expanded. While previous studies on financial cycles have focused on the empirical study of them, there are still many open questions, especially for country characteristics relevant for the application of macroprudential policy at the national level, and the relationship of the financial cycle and crises.

The issues raised in this paper are not given due attention in the domestic literature. As for the foreign researches, the study of financial cycles, their indicators, duration, involved such economists as C. Detken, F. Smets, C. Goodhart, B. Hofman, M. Schularick, A. Taylor, C. Borio, P. Bracke, P. Lowe, M. Drehmann, L. Alessi, T. Ng and others. In their studies, the authors highlight the excessive credit growth is one of the best predictors of crisis. M. Drehmann, C. Borio attempt to identify the financial cycle for the US and other selected countries [6,7,16]. They propose assessing the financial cycle by combining credit and property prices. C. Borio studies the stylized features of the financial cycle and says that it has a longer duration and wider amplitude than the traditional business cycle [6, 7]. Also C. Borio contends that most banking crises tend to be headed by fast credit expansion, going on close to the peak of the financial cycle. A related opinion is shared by V. Schularick and A. Taylor, who determine that credit aggregates provide information about the likelihood of future financial crises and that the latter should be viewed as "credit booms gone wrong" [23, p. 1042].

Overall, special attention is paid to financial cycle's drivers and their determinants in developed countries [6, 14, 19]. Meanwhile, outside the research are often factors influence the depth of financial cycles in emerging economies and their ability to adjust to new functioning conditions and transformation of resources under cyclic economic development. For further expansion of knowledge about financial cycles occurring as globalization and integration is impossible without building capacity adaptability of the national economy to cycling.

The purpose and objectives of the study is to summarize the information about financial cycle and find out it relationship with the economic crisis.

The financial crisis has encouraged a new interest in macro-prudential policy as a basis to address the stability of the financial system as a whole, rather than only its individual components. The crisis showed us that while being an objective of global relevance, maintaining financial stability is more central in contexts in which financial relations are strong and deep.

Though there is a lot literature analyzing various aspects of financial market developments, common understanding of financial cycles is still restricted. This shows the simple fact that most of the literature studies only selected aspects of financial cycles. For example, one researches are survey the implications of only booms in asset prices and credit, rather than considering full cycles in these markets. Others ones are focus on financial crises in many respect only the downturn phases of cycles.

In contrast to cyclical movements in the real economy (business cycle), no "natural" cycle measure is available for the financial sector. In comparison to business cycles, financial cycles evolve over the medium term and their analysis goes beyond the shorter term focus of business cycle theory. The cyclical movements of

financial variables may amplify economic fluctuations, trigger imbalances, lead to macroeconomic destabilization and/or threaten financial stability.

In general, in the literature there is no consensus about the nature of the financial cycle - universally accepted definition of a financial cycle does not exist.

The closest definition – "the self-producing relationship of the value of assets, risks, financial constraints led to a boom and then a drop in the markets" [6]. In contrast to business cycles, no obvious "natural" financial cycle measure is available [7].

Recent literature shares a broad description of the financial cycle but struggles to come up with an appropriate indicator [2, 3, 8]. Financial cycles can be distinguished from business cycles through their amplitude and frequency. Financial cycles evolve over the medium term and their analysis should go beyond the shorter term focus of business cycle theory. This means that the completion of full peak to trough cycles may last up to decades [2]. C. Borio defines financial cycles as "self-reinforcing interactions between perceptions of value and risk, attitudes towards risk and financing constraints, which translate into booms followed by busts" [6]. The interactions may amplify economic fluctuations, trigger imbalance and lead to macroeconomic destabilization and/or threaten financial stability. In this study, we follow this definition [7].

One part of literature describes financial cycles indirectly and obtains findings of financial cycles are not their respective analytical goals. Studies relate financial indicators such as asset prices or credit aggregates to economic activities [3, 5, 6, 12, 13]. Others use financial factors as important indicators in primary warning [6, 16,19].

The direct way of characterizing the financial cycles started in the aftermath of the Global Financial Crisis. For example, D. Aikman investigates credit cycle characteristics across 14 advanced countries over a long period (1870–2008) [2]. Others researches such as S. Claessens analyse cyclical movements of credit, housing and equity prices for 21 advanced countries from 1960 to 2007 [12]. Note, that both analyses offer evidence of high synchronicity of the individual series, in particular between the credit and house price cycle. The investigation provided by M. Drehmann is the first try to build a synthetic financial cycle measure by combining medium term fluctuations of financial variables for seven advanced countries from 1960 to 2011 [16]. The grouping of credit aggregates and house prices works well, whereas equity prices tend to be destructive rather than beneficial. They also show that a financial cycle's amplitude and duration have increased since the mid-1980s. D. Aikman, M. Drehmann demonstrate tight links between peaks of financial cycles and systemic banking crises [2, 16].

Although the literature employs different metrics, it provides similar conclusions and insights: compared to business cycles, financial cycles tend to have a higher amplitude and lower frequency.

Closely linked to the literature on financial cycles, research is also related to the macro prudential policy framework. An increasing amount of literature is devoted to examining the effectiveness of the cyclical movement of credit measures (e.g. credit to GDP gap) for defining the countercyclical capital buffer rate [3, 20, 21]. Note that the counter-cyclical buffer is used in the case of more than 1 standard deviation from the trend. If the deviation is greater, should take active measures to reduce this figure.

The cyclical movement of this credit measure is used as an early warning indicator to spot the buildup of financial vulnerabilities, although the predictive power of various credit aggregate measures varies [13, 22].

Observing credit growths is also relevant for the purposes of preserving financial stability: in the Basel III proposed implementing a countercyclical capital buffer in order to protect the banking system and the economy from periods of extra credit growth or slowing. It was also suggested that the credit-to-GDP ratio gap constitute an indicator of excessive credit growth. The credit-to-GDP ratio gap is defined as the deviation of bank loans – expressed as a ratio to GDP – from its long-term trend and thus is itself a measure of the financial cycle, and an indicator of financial leverage [6, 7].

A critical review of literature on the financial cycle, allowing to distinguish the following special features:

– most precisely our position in the financial cycle show property prices and the cost of credit. Lending is particularly important in the construction and purchase of real estate, so that these two components are usually interrelated. Share prices are with the two landmarks much less correlation;

– also important are the interest rates in the study of cycles, volatility, risk premium, bad credit, etc.;

– financial cycles are replaced less frequently than business;

– immediately after the peak of the financial crisis should be a crisis. Usually, as soon as the cycle reaches its highest point, it begins the banking crisis;

– the recession after the financial crisis worse than after the economic. Typically recession 50% deeper than the drop caused by the business cycle;

– the crisis can be predicted. The modern theory of financial cycles can detect signs of crisis in the future. Moreover, the risk can be determined quite precisely and in real time. The most clear guideline - is both a positive indicator of the deviation of the loan to GDP and asset prices, particularly real estate, from historical norms;

– the cycle time depends on the policy of the state: the weaker fiscal policy, the stronger the upward and downward part of the cycle.

The analysis of models dedicated to the issues of the forecast financial crises made it possible to identify three main aspects:

1. Financial booms not only preceded the crisis, they cause them. The crisis is a consequence of vulnerabilities that arise during the boom phase.

2. That credit and debt in general, are the engine of any boom, because the company can afford to spend more and buy. This leads to an incorrect allocation of resources, and, both capital and labor. As soon as the price of assets and cash flows begin to decline in the recession stage, the debts are converted into indicator restraining recovery.

3. According to the theory of financial cycles, inflation may be stable, but the production at the same time will decrease or increase, which is associated with financial imbalances.

Thus, the importance of financial cycle studying and forecasting is no doubt. Moreover, in the present conditions of Ukrainian economy functioning, caused by the action of external and internal shocks to which the economy was not ready, due to the incompleteness of the important market transformation processes, strong dependence on external conditions, monetization and dollarization and advancing the growth of the financial sector in isolation from the real, this question is very relevant.

Based on analysis of literature and taking into account the financial cycle indicators, made the analysis of its dynamics in Ukraine. It should be noted that its implementation in our country will have a specific character, particularly in the past years due to financial, economic and political instability.

The domestic financial system on the eve of the financial crisis of 2008-2009 had all the signs of a boom. Recognizing the impact of many factors on the development of crisis processes in Ukraine, including systemic, cyclical role as driver components negative trends in the credit market, taking into account the transfer of cyclical shocks from external financial markets can't be overemphasized.

In order to examine the main stylized features of the Ukrainian financial cycle first of all focused on the credit-to-GDP ratio (figure 1).

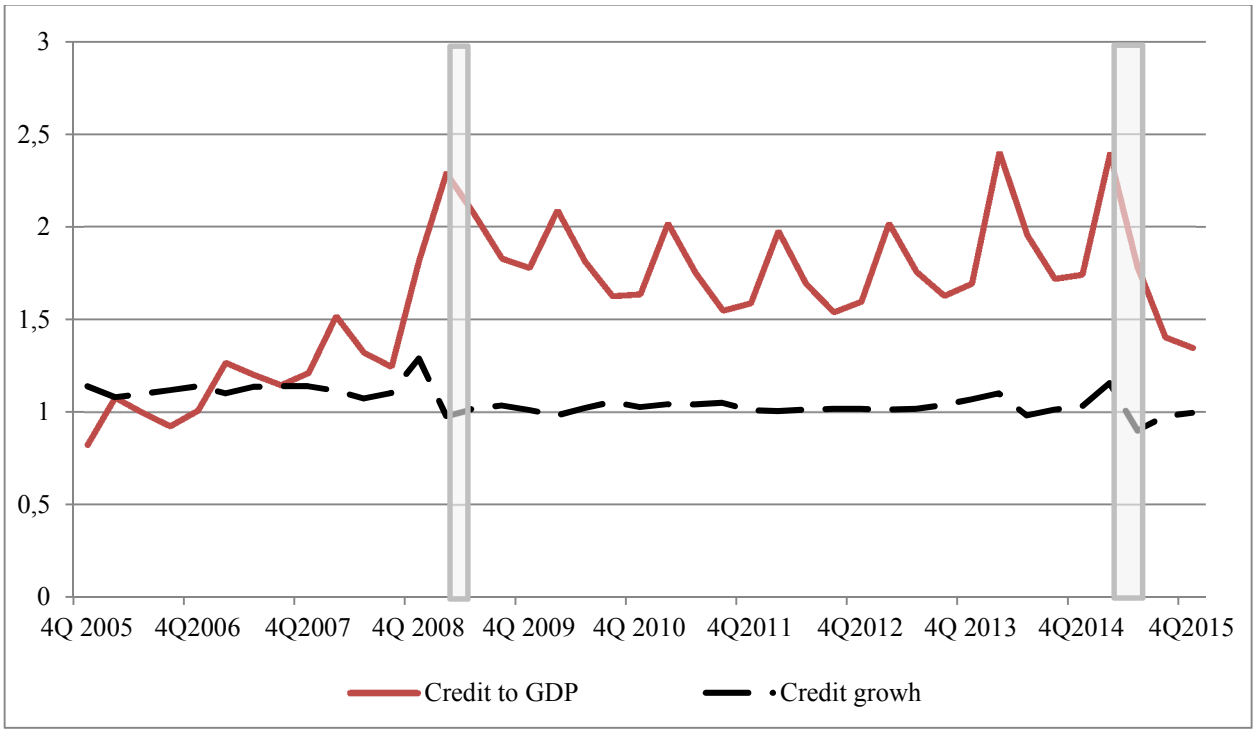

Fig. 1. Cyclical movements of financial indicators in Ukraine

The data in Figure 1 show the significant fluctuations of the main indicators of the financial cycle - the ratio of loans to GDP. This dynamics shows a significant exposure of financial system of Ukraine to crisis. The analysis highlighted that in late 2008, once the financial cycle peak, the crisis occurred in Ukraine. This situation was due to the influence of external factors and the influence of many external factors and unfolding in this period of global financial crisis. The grey shaded areas in the figure 1 reflect financial crisis periods.

The data on Figure 1 shows the cyclical components of the credit to GDP ratio and credit growth. Both panels help us to characterize the underlying indicators and to make statements about their potential usefulness. An obvious caveat of this investigation is the limited number of full cycles incorporated in this time period.

The graphical investigation of financial cycle measures does not provide a conclusive indication as to which financial cycle measure to choose, but it provides some intuition that banking sector variables seem to be essential to model the financial cycles.

In total, we use five potential financial cycle measures (Figure 2) with different ingredients. All cycle indicators include core component(s) but also vary with regard to additional variables considered in the analysis.

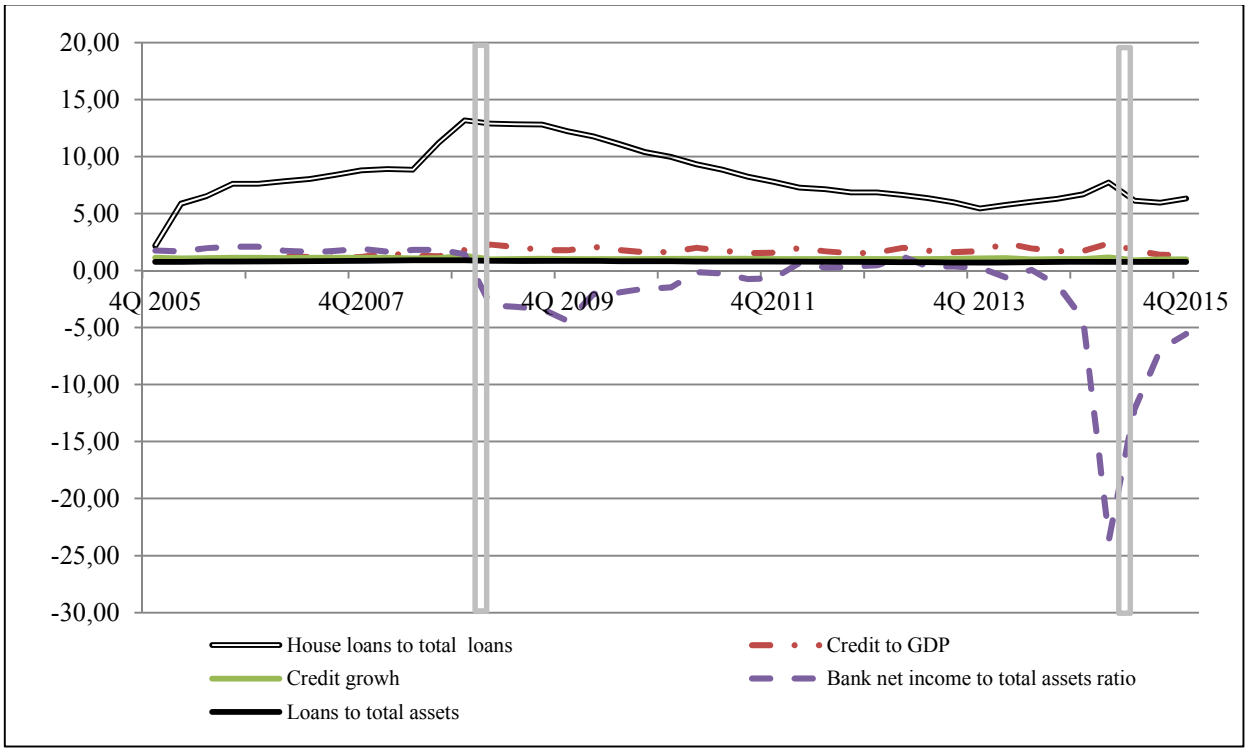

Fig. 2. Dynamics of financial cycle measures in Ukraine

Recent macro prudential literature is in favour of using this indicator, arguing that filtered credit to GDP time series is helpful in predicting financial crises and that the explanatory power can only be increased gradually by adding further indicators. It should be noted that not any increase in lending is a form of credit boom. To intensify the credit processes can lead, as gain financial development and a corresponding increase in financial depth, so it "normal" cyclical trends associated with the rise of the economy, its greater demand for credit. However, it is the rapid growth associated with excessive strengthening of financial imbalances and tend to a financial crisis.

Turning points occur at different points in time and the amplitudes of cycle measures tend to differ. All of financial cycle measures (Figures 1-2) share similar dynamics. This similarity is explained by the fact that the measures share some common components. The peaks of the cycle measures seem to be related to periods of financial distress although not every peak is associated with a financial crisis. Figure 2 also confirms the limitation of the data, since not every financial cycle measure is available at Ukraine.

From the analysis, the following conclusions could be made:

– financial system in Ukraine has signs of the financial crisis. During 2006-2007 there was expansion in lending and in this period was laid the foundations for the next severe financial decline and long periods of unstable economic recession repair;

– due to insufficient development of the financial market in terms of the required level of institutional support, lack of proper regulation of these processes by the central bank was not achieved qualitative distribution of credit and was not introduced macro-prudential regulation principles;

– dynamic of financial cycle indicators suggests a steady increase in the capacity of display is not resilient financial processes from the second quarter of 2006;

– based on the dynamics determined that the peak deviation cyclical components of the trend occur in the end of 2008 and in mid-2015;

– based on the regularities of cyclical financial processes can note the existence of relevant negative effects of unregulated credit expansion in duration and recession amplitude;

– it is necessary to deal with the credit boom with the help of fiscal, monetary and macroeconomic policy. This will constrain the development imbalances, and to quickly deal with the consequences. The government can thus remove what is called "excessive flexibility" of the system.

As one of the effective method is to increase reserve requirements and liquidity of banks, for example, as part of Basel III, but not during the crisis and during the boom. It's also very important to central banks when conducting monetary policy should be guided by not only inflation, but also other indicators of the financial market.

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Усик І. О. Природа фінансових циклів та їх роль в розвитку кризових явищ

Розглянуто сутність фінансових циклів і особливості їх прояву: більш тривалий період порівняно з економічними циклами, проходження фази кризи слідом за піком циклу, більш важкий характер рецесії. Виявлено ключові індикатори фінансового циклу: кредитна складова (відношення кредитів до ВВП, темп зростання кредитних ресурсів, відношення обсягу кредитних ресурсів до активів банківської системи) і динаміка цін на нерухомість. Проаналізовано динаміку прояви даних індикаторів в Україні та запропоновано напрями мінімізації впливу фінансової циклу.

Ключові слова: фінансовий цикл, бізнес-цикл, показники фінансового циклу, банківська система, відношення кредитів до ВВП, фінансова криза.

Усик И. А. Природа финансовых циклов и их роль в развитии кризисных процессов

Рассмотрены сущность финансовых циклов и особенности их проявления: более длительный период в сравнении с экономическими циклами, следование фазы кризиса вслед за пиком цикла, более тяжелый характер рецессии. Выявлены ключевые индикаторы финансового цикла: кредитная составляющая (отношение кредитов к ВВП, темп роста кредитных ресурсов, отношение объема кредитных ресурсов к активам банковской системы) и динамика цен на недвижимость. Проанализирована динамика проявления данных индикаторов в Украине и предложены направления минимизации влияния финансового цикла.

Ключевые слова: финансовый цикл, бизнес-цикл, показатели финансового цикла, банковская система, отношение кредитов к ВВП, финансовый кризис.

Usik I. A. Financial Cycles Nature and its Role in the Crisis Processes Development

The essence of financial cycles and features of their display: a longer period in comparison with the economic cycles, following the phase of the crisis after the cycle peak, more severe recession. Identified key indicators of the financial cycle: credit composes (the ratio of loans to GDP, the growth rate of credit resources, the ratio of credit to the assets of the banking system) and the dynamics of real estate prices. The dynamics of these manifestations in Ukraine indicators and directions to minimize the impact of the financial cycle.

Keywords: financial cycle, business cycle, financial cycle indicators, banking system, credit-to-GDP ratio, financial crisis.

Received by the editors: 01.12.2015
and final form 28.12.2015

UDC 338.242:336.77

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SPECIFICS OF DETERMINING THE MARKET ASSESSMENT RIGHTS REQUIREMENT FOR OBLIGATIONS ARISING FROM THE IMPLEMENTATION OF THE BANK CREDIT OPERATIONS OF DIFFERENT QUALITY THAT ARE SECURED AND UNSECURED COLLATERALLY

Problem and its solution. Debt obligations of the debtor to the creditor are special kind of assets, which are based on the right to obtain certain economic benefits. The problem of the assessment rights requirement for obligations under the credit agreement has acquired special urgency after the crisis of 2008, when the banks had overdue portfolios of loans (bad debts of borrowers).

The cost of the claim is the result of many factors analysis, however the arrear is one of the main but not the only factor in the value of the rights requirement for obligations. Despite the presence of publications on this issue that highlight the general methodical bases of the object evaluation, there are still many unresolved problems in contemporary assessment practice. First of all it is necessary to develop a model for determining the assessment rights requirement for obligations arising as a result of bank credit operations implementation in specific conditions related to assess, the status of the lender (the Bank) and the lack of sufficient information regarding the object assessment.

The number of local scientists and practitioners dedicated their research papers to the finance assessment of debt obligations. Among them I.Galkin, O.Drapikovskyy, Y.Dehtyarenko, N. Zhylenko, I. Ivanova, V. Lartsev, N. Lebid, J. Marcus, O. Mendrul, S.Sivets, S.Skrynko, O.Puzenko, F.Puziy, A.Chirkin as well as the international scientists such as A.Damodaran, V.Hrybovskyy A.Hriaznova

A.Gregory, F.Evans, Y.Kozyr, V.Mykhaylets, O.Stoyanova, T. Harrison.

Taking into the consideration their significant contribution to the methodological support formation of the financial assessment of property rights, it is worth noting the lack of disclosure of the assessment rights requirement for obligations problem arising as a result of bank credit operations implementation.

The article aims to study and test the standardized mechanisms of the assessment rights requirement for obligations arising as a result of bank credit operations implementation.

Presentation of the main material.

The demands on the reliability of the banking system are increasing with the development of market relations in Ukraine and which is largely determined by the size and condition of the credit institutions assets. In these conditions the need of their reliable value assessment is increasing and is adequately characterized by the market value.

On the whole, the information about the market value of credit institutions assets can serve as a basis for the solution of many problems both the issues of general importance and the ones of the banking sector functioning and some of its units. This assessment allows making more informed decisions about maintaining the efficiency of credit institutions with the owners, managers and investors when making decisions on mergers and acquisitions, liquidation and treatments conducting; maintaining the financial situation which are adequate to market conditions; predicting their future development and behavior in the market; a more accurate risk assessment of the interaction between contractors and the credit institution.

At the national level, these kinds of data help to implement the effective regulation and the banking system supervision that are very important in solving problems of restructuring, treatment and strengthening of the whole financial system. In addition, this information is essential to determine the actual tax base and for credit institution property insurance.

The commercial bank as the most important financial and economic institute, of course, obviously has its own peculiarities of assessment and its value determination. Considering this question one of the prominent representatives of foreign school American economist P. Rose comes from the premise that the bank activity indicators are oriented on two interrelated characteristics i.e. profitability and risk that are to be materialized in the bank value indicator. This is because commercial banks are entrepreneurial corporation with the task to maximize the funds value contributed by shareholders, while maintaining acceptable level of risk.

Naturally, the main asset of the bank, which determines the size and financial situation, is the individuals and entities loan portfolio. So, it is extremely important to develop a unified methodology of the assessment rights requirement for obligations in these loans portfolios.

The background information for the assessment rights requirement for credit, credit is in the case materials and is formed on paper and should contain:

- written request (application) about the debtor's loan;
- business plan, feasibility study of need for the definite goal (if applicable);
- contracts and / or purchase and sale agreement (if any);
- financial statements (for legal entities), income information (for individuals) of a debtor;
- financial and budget statements (for budgetary institutions);
- information on receipts on current bank accounts at least the last six full months;
- information provided by the debtor and validated by other banks about:
  a. debtor indebtedness defining basic terms of the loan (the amount of the contract, term debt balance, type of collateral, etc.);
  b. evidence of the overdue indebtedness;
- information about the debtor's obligations to the bank according to previous agreements, credit history (if any);
- information about the verification of proper loan use;
- supporting documents (statement of balance sheet and off-balance sheet accounts, payment orders, etc.) providing the evidence of loan provision and repayment, the existing financial obligations, mortgaged property recognition, etc;
- audit report on the financial status of the debtor;
- constituent and registration documents (for legal entities), copies of the relevant pages of the passport and the registration number certificate of the taxpayer registration card (for individuals);
- loan agreement and additional agreements thereto;
- mortgage loans agreements and additional agreements to them, guarantee letters;
- documents confirming person authority to sign a loan agreement, mortgage loans agreements and additional agreements thereto on behalf of the counterparty bank;
- copies of title documents on property (the legal claim) that is transferred as collateral;
- documents confirming the market value of the mortgaged property (the legal claims) during the loan disbursement;
- documents proving the existence and the quality preservation of the mortgaged property (acts, information, inspections materials);
- documents proving the property encumbrances and its state registration in accordance with the laws of Ukraine;
- insurance agreements of the mortgaged property and documents confirming insurance payment (if any);
- information about measures taken by the bank to repay debt (documents certifying debt collection and recovery procedure).

Debt obligations nature causes a lack of their wear factors and does not include the cost of reproduction. The use of the cost approach for the debts obligations assessment reduces to their book value determination adjusting for the obligations which limitation period has expired or something alike. Therefore, taking into account the mentioned above, the cost approach is not used in the process of the assessment rights requirement for obligations.

Considering that information about such objects sale is limited and does not meet the criteria of reliability the comparative approach is not applied as well.

Income approach is the only one of the universally accepted approach that allows building the assessment model, taking into account the specifics of the object assessment and existing burden of rights requirement. That is why we believe it is necessary to apply the income approach as the one that reflects the market situation the most accurately.

The market value assessment of rights requirement for obligations is carried out in the following stages using the income approach:

- forecasting the possible income options from management (order) of the estimated legal requirements;
- determining the forecast period for each of the mentioned variants, presenting the key assumptions that will be used during the assessment;
- drawing up a possible plan of the debtor cash flow including debt collection regarding the presumptive time of payment receipt for each of the income presumptive options (cash flow). The expected gross income from obligation reimbursement is determined at this stage for each of the presumptive options.
- forecasting the presumptive volume of expenditures associated with gross income obtaining in each of the presumptive options;
- calculating the expected net cash flow for each forecast period as the difference between gross income and expenses;
- determining the discount rate for each of the presumptive options;
- calculating the value of rights requirement for obligations as the sum of the present value of net cash

flows for each of the presumptive options of forecasting and the results reconciliation, to justify the estimated the market value assessment of rights requirement for obligations.

The market value of the rights requirement for loan agreements is advisable to calculate according to the formula:

$$V_m = V_{col}\frac{1-R_{col}}{(1+r_0)^N} + (V_d - V_{col}\frac{1-R_{col}}{(1+r_0)^N}) \times \frac{1-R_{cr}}{(1+r_к)^N} \times p_e ,$$

where:

V_m – the market value of debt obligations;

V_{col} – the collateral total value for credit operations;

V_d – the debt total value on a credit transaction at the assessment date;

R_{col}, R_{cr} – thereafter, rate risk associated with the presence of collateral property rights and rate risk associated with the presence of collateral property rights under the loan agreement;

r_0 – basic discount rate that is equal to the credit cost for commercial banks (offering to take at NBU discount rate);

$r_к$ – the discount rate for credit operations in accordance with the credit quality category and the debt service state;

N – discount period - the period during which cash flows are expected from the execution of debt obligations (depending on the claim of the creditor);

p_e – plausibility that the debtor (payer) is able to fulfill debt obligations from an economic point of view.

It is worth mentioning that if $V_m > V_d$, then $V_m = V_d$.

The use of this model can adequately take into account not only the cash flows at the time, but also the legal and economic quality of these debt obligations that eventually form their cost.

Forecasting cash flow schedule (expected creditor revenues) from debt obligations fulfill is advisable to perform according to the state of claim activity (Table 1).

Table 1

Terms of fund receipts depending on the state of claim activity

Claim activity procedure and its duration	Claim activity stage	Term of the funds, months.
Claim activity is directed (terms of delay is 1-1.5 months)	Claim activity was not performed	10 -20
Waiting for a response and sue (1-2 months)	Claim activities are directed and period for reply is sustained	9-18
Judicial trial (3-6 months).	There is court decision and enforcement proceedings are initiated by the State Executive Service	6-12
Enforcement proceedings by the State Executive Service (6-12 months.)	-	-

The discount rate for loan operations ($r_к$) is determined by risk level for loan operations in accordance with the clause of the National Bank of Ukraine (Table 2) [3].

Table 2

Risk calculation of indicator provided to the debtor

Credit quality category	Number of delayed days of	The accepted value of the discount rate, %
I – the highest category	0-7	0-6
II	8 -30	7-20
III	31 - 90	21-50
IV	91 - 180	51-99
V – the lowest category	beyond 180	100

On the basis of the relevant legal analysis, determination of the probability that the debtor (payer) will be required to fulfill the collateral (guarantee, mortgage) debt obligations from a legal point of view, is the risk associated with the presence of collateral property rights. This risk is offered to be calculated according to the following algorithm:

1) the total risk is determined according to collateral certain type (not more than 100%);

2) cost shares of all collateral types for credit operations are calculated;

3) weighted risk associated with the presence of property rights for all kinds of collateral is calculated.

Criteria for determining the total risk for a certain type of collateral listed below [6].

Real Estate:

- physical lack of documented collateral is 100% risk which does not allow the further collateral assessment;
- lack of registration record in the state register is a high risk of penalty imposition on the property. The recommended risk is 30-50%;
- lack of the borrower corporate body decision carries a high threat of a positive outcome for property enforcement procedure. The recommended risk is 50%;
- the collateral correct description is critical in case of significant errors in the subject description. The risk can be assessed up to 100% depending on the correctness;
- the collateral quality characteristics may be affected by the time of the assessment date until the collateral realization (physical wear and intentional harmful effect). The risk can be assessed up to 20%.

Movables:

- physical lack of documented collateral is 100% risk which does not allow the further collateral assessment;
- the disputes availability over the collateral property is estimated depending on the collateral appeal process, the lawyer represents the expert assessment of the litigations successful outcome probability. The risk can be assessed up to 100%;
- the risk is zero if the fully autonomous use of collateral is possible, if the autonomous use of the collateral involves significant capital investment to its current state, the risk is assessed in proportion to the level of expenditure;
- risk of inconsistencies in the details of the property mortgage contracts and accounting documents could be assessed up to 100% in consultation with a lawyer Client (as in the case of appeal cases with similar collateral);
- the collateral quality characteristics may be affected by the time of the assessment date until the collateral realization (physical wear and intentional harmful effect). The risk can be assessed up to 50%.

Guaranty

- lack of the borrower corporate body decision carries a high threat of a positive outcome for property enforcement procedure. The recommended risk is 50%;
- the recommended risk is 100% in the absence of information on the financial and property status of guarantor.

The determining of probability that the debtor (payer) will be required to fulfill the debt obligations under the credit agreement from a legal point of view is the risk associated with the presence of rights requirement under this agreement. This risk is offered to be calculated according to the following recommendations:

- incorrect execution of agreement on the loan and additional agreements to it. The risk can be assessed up to 100%;
- lack of the borrower corporate body decision carries a high threat of a positive outcome for property enforcement procedure. The recommended risk is 50%;
- the risk is 100% in case of absence of borrower's physical accessibility (borrower left the country, died or his location is not established).

The probability that the debtor (payer) meet debt obligations from an economic point of view depending on the debt service state has been identified and summarized by an expert, based on actual assessments of loan portfolios (Table 3).

Table 3

Terms of debt, days	Probability
to 30	1
31-60	0,95
61-180	0,50
181-365	0,35
366-545	0,25
546-1095	0,10
beyond 1095	0,05

* 5% probability is taken to resolve the situation for ATO and Autonomous Republic of Crimea zones.

Example of the market value calculating of the loan portfolio is presented in table 4.

It should be noted that the revaluation of portfolios that are NBU pledged and the loans which quality has deteriorated to the III-V categories of quality aren't taking into consideration (NBU Resolution of November 18, 2015 N 794).

Conclusions

Nature of debt obligations is specified by lack of wear factors and does not include the cost of reproduction. The cost approach usage for debt obligations assessment is reduced to the determination of their carrying value with amount of obligations adjustment for which the period of limitation is expired. Therefore, the cost approach in the process of determining the value of the assessment rights requirement for obligations is not used.

Using a comparative approach in the debt obligation assessment is not possible due to lack of market information related to the analogs selection and editing performing. That is, the application of the income approach for the assessment rights requirement is the only option. The income approach methods correspond to the principles of determining the assessment market value mentioned above.

The approaches and assessment methods correspond to the current legislation to implement professional appraisal activities in Ukraine as well as national and international standards and meet the resolution criteria of the National Bank of Ukraine on the calculation of the loan risk indicator.

Table 4

The market value of rights requirement calculation for credit operations

S No.	Name of the borrower on the loan whose rights requirement is estimated	The total amount owed on the loan, UAH.	Quality credit category	The collateral total cost at the assessment date	R_{col}	R_{cr}	Credit risk index	Stage of claims	The loan market value
1	2	3	4	5	6	7	8	9	10
1	Ivan Ivanov	176 849,46	I	100 289,98	0,95	1	0,00	Work wasn't carried out	176 849,46
2	Anton Lazo	266 191,95	II	186 789,74	1	1	0,20	Work wasn't carried out	231 577,51
…	….	….	…	…	…	…	…	..	…

Methodical measures included statistical data collection agencies in determining the likelihood that the debtor (payer) meets debt economically depending on the state debt service.

The statistical data of the debt collection agencies are included in the methodical measures to determine the probability that the debtor (payer) meet debt obligations from an economic point of view depending on the debt service state.

The proposed assessment model allows to determine the assessment rights requirement for obligations not only under the specific credit agreement, but also by formed credit portfolio of the bank, at minimum cost and in terms of not sufficient information conditions on property assessment.

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Столяров В. Ф., Артеменко Д. М. Особливості визначення ринкової вартості прав вимоги за зобов'язаннями, що виникають внаслідок здійснення банком кредитних операцій різних категорій якості, які забезпечені та не забезпечені заставою

У статті запропоновані уніфіковані механізми оцінки прав вимоги за зобов'язаннями різних категорій якості, що виникають внаслідок здійснення банком кредитних операцій. Конкретні підходи та методи оцінки, відповідають чинному законодавству щодо здійснення професійної оціночної діяльності в Україні, а також національним і міжнародним стандартам оцінки та задовольняють вимогам положень Національного банку України про порядок розрахунку ризику кредиту. Запропонована модель оцінки дозволяє визначити вартість прав вимоги зобов'язань за сформованим кредитним портфелем банку, за мінімальних витрат та браком достатньої інформації відносно об'єкту оцінки.

Ключові слова: ринкова вартість, кредитна операція, оціночні процедури, підхід до оцінки, кредитний портфель, ризик кредиту, дисконт, забезпечення, принципи оцінки.

Столяров В. Ф., Артеменко Д. М. Особенности определения рыночной стоимости прав требования по обязательствам, возникающим вследствие осуществления банком кредитных операций различных категорий качества, которые обеспечены и не обеспечены залогом

В статье предложены унифицированные механизмы оценки прав требования по обязательствам различных категорий качества, возникающих в результате осуществления банком кредитных операций. Конкретные подходы и методы оценки, соответствуют действующему законодательству по осуществлению профессиональной оценочной деятельности в Украине, а также национальным и международным стандартам оценки и удовлетворяют требованиям положений Национального банка Украины о порядке расчета риска кредита. Предложенная модель оценки позволяет определить стоимость прав требования обязательств по сложившемуся кредитному портфелю банка, при минимальных затратах и нехватке достаточной информации относительно объекта оценки.

Ключевые слова: рыночная стоимость, кредитная операция, оценочные процедуры, подход к оценке, кредитный портфель, риск кредита, дисконт, обеспечение, принципы оценки.

Stolyarov V. F., Artemenko D. M. Specifics of Determining the Market Assessment Rights Requirement for Obligations Arising from the Implementation of the Bank Credit Operations of Different Quality that are Secured and Unsecured Collaterally

This article offers the standardized mechanisms of the market assessment rights requirement for obligations of different quality categories arising as a result of the bank credit operations implementation. Specific approaches and assessment methods are relevant both to the existing legislation of the professional appraisal activity implementation in Ukraine and to national and international assessment standards, and meet the criteria of the National Bank of Ukraine on the calculation of credit risk. The proposed assessment model allows to determine the assessment rights requirement for obligations by the formed credit portfolio of the bank at minimum cost and the lack of sufficient information concerning the object assessment.

Keywords: market value, credit transaction, assessment procedures, assessing approach, the credit portfolio, credit risk, discount, maintenance, assessment principles.

Received by the editors: 12.12.2015
and final form 28.12.2015

Marketing

UDC 338.45+330.131.7(497.2)

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RISKS ASSOCIATED WITH THE MARKET BEHAVIOUR OF BULGARIAN INDUSTRIAL ENTERPRISES

Problem Statement. Bulgarian industrial enterprises operate in extremely competitive global markets that are characterized by complex economic relationships among market players, great variability of the current rules and mechanisms and great market volatility. The uncertain and dynamic market situation, on the one hand, and the multi-faceted business objectives and goals – on the other, undoubtedly lead to many options when choosing a market behaviour model. The formulation, creation and implementation of the appropriate model of market behaviour demonstration, which ensures that Bulgarian industrial enterprises adapt timely to modern challenges, create prerequisites for the emergence (appearance) of multiple risks. The majority of potential risks can have a significant impact on the status and performance of industrial enterprises, their competitiveness and market efficiency. Therefore, the ability of industrial enterprises to develop and implement an adequate and reliable risk management process is becoming a vital factor for their normal operation and development.

Analysis of Researches and Publications. The risks related to the behaviour demonstrated by industrial enterprises on target markets are a topical scientific field for theoretical and empirical research, which is constantly expanding its range and is increasingly attracting scholars' interest. The following foreign scholars deal with this issue: Ph. Kotler, K. Keller, W. Beaver, G. Parker, J. Fraser, B. Simkins, C. Pritchard, A. Decker, I. T. Balabanov, I. S. Menshikov, D. A. Shelagin, D. V. Sokolov, A. V. Barchukov, N. V. Hohlov, etc. A number of Bulgarian scholars also contribute to the issue: R. Gabrovski, B. Nikolov, T. Nenov, M. Aleksandrova, P. Banchev, N. Yankov, etc.

The objective of this article is to highlight some of the main risks accompanying the demonstration of a certain market behaviour by Bulgarian industrial enterprises, to present the results of analyzing the risk exposure and problem areas in their market behaviour, and to justify the opportunities for affecting the risks and hence to limit and reduce the adverse consequences of their occurrence.

Presentation of the Main Material. The dynamic and uneven development of markets and the rapid development of market relations arising from globalization have led to an increase in the uncertainty related to the adoption of a particular market behaviour model by Bulgarian industrial enterprises. The industrial enterprises in Bulgaria have become particularly sensitive to the changes in market parameters (factors) and new market challenges (increased competition, changes in demand and consumer buying behaviour, strong market segmentation, market saturation in more and more product categories, etc.) [6]. This inevitably raises the likelihood of the occurrence of a number of risks and increases their degree of risk exposure. It is a fact that there are a lot of risks in the market behaviour of industrial enterprises in Bulgaria and they are characterized by a great diversity (see Fig. 1). The attempt for a systematization and priority treatment of certain types of risks is predetermined by the risk profile specifics, their diverse nature, size and dynamics (intensity), the frequency of occurrence and the weight (size) of the consequences, and the functional area of manifestation [1; 4; 8].

Based on an empirical study among 115 industrial enterprises in Bulgaria[1], which have different objects of activity, some of which – strongly export-oriented, it was found that according to their 'nature', the share of *subjective risks* predominates (56.9%). These risks are most often associated with the educational and qualification level, professional experience, competencies, abilities and attitudes of executives involved in the development of the enterprise's marketing strategy. For example, 28.6% are the result of the executives' erroneous assessment of the short- and long-term interests related to the industrial enterprise's behaviour on specialized markets, 25.8% are due to errors in assessing the current state and the nearest prospects for market development, 19.1% – due to the incorrect market situation forecast, 14.6% –due to the inadequate needs assessment in the sphere of consumption and domestic production, 11.9% – due to premature or untimely decision-making, as well as the implementation of inoperative models on demonstrating appropriate market behaviour.

[1] Structurally, the majority of enterprises are medium-sized – 51.2%, small-sized enterprises are 23.8%, large-sized enterprises – 15.5% and micro-enterprises – 9.5%. According to the form of capital ownership, the majority of industrial enterprises are entirely funded by Bulgarian capital – 52.4%, 36.9% are funded by mixed capital and only 10.7% are totally funded by foreign capital.

The proportion of the *objective risks* is also quite substantial (43.1%), which can hardly be controlled, predicted and managed by the executives in the industrial enterprises. These are the risks which are due to the multi-directional and dynamic impact of the business environment factor parameters (see Table 1). The results obtained show that executives are increasingly experiencing difficulty in making the right decisions, in-depth analysis and objective assessment in response to the changes in the external environment. Therefore, more innovation and flexibility in the management approaches are desirable, as well as learning from the experience and implementing the best practices of the leading industrial organizations in this field.

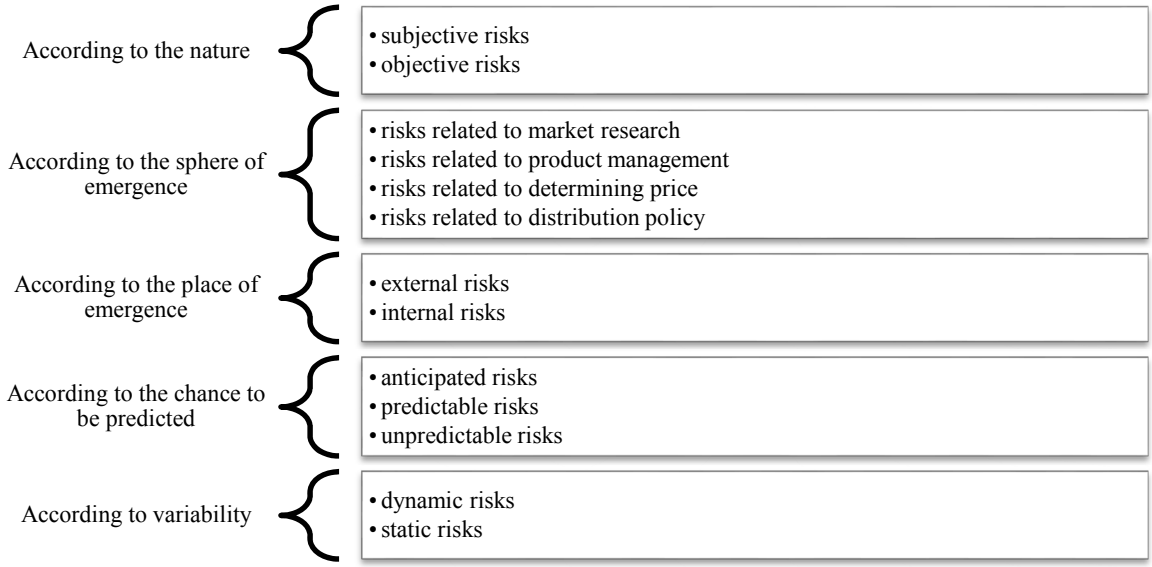

Fig. 1. Types of risks, related to the market behaviour of industrial enterprises

Table 1

Structure of Bulgarian industrial enterprises according to the assessment of macro- and meso-factors, influencing their market behaviour

Macro-factors	Impact strength*				
	0	1	2	3	4
Macroeconomic stability	-	8.3	7.1	19.0	63.1
National legislation	2.4	6.0	13.1	36.9	41.7
International trade regulations and restrictions	3.6	2.4	4.8	23.8	61.9
Market liberalization	1.2	2.4	16.7	58.3	21.4
State of the financial and capital markets	2.4	6.0	14.3	34.5	39.3
Number and structure of the country's population	3.6	4.8	58.3	25.0	8.3
Migration processes	3.6	6.0	51.2	22.6	14.3
Education and professional training of the population	1.2	2.4	20.2	26.2	46.4
Development of information and communication technologies	1.2	1.2	34.5	4.8	58.3
Meso-factors	**Impact strength**				
	0	1	2	3	4
Presence of established (good) practices in market behaviour in the sector	1.2	9.5	7.1	17.9	61.9
Production features and characteristics of goods and services requiring specific market behaviour methods and activities	-	4.8	7.1	14.3	72.6
Number of enterprises in the sector, having an impact on the level of competition	-	3.6	8.3	63.1	21.4
Concentration of enterprises in the sector in a certain region	2.4	6.0	13.1	58.3	17.9
Presence of production and social infrastructure	2.4	-	17.9	16.7	60.7

** Assessment scale from 0 to 4: 0 – no impact; 1 – almost no impact; 2 – slight impact, 3 – moderate impact, 4 – strong impact.*

The study reveals surprising results regarding the functional area of risk manifestation associated with the market behaviour of Bulgarian industrial enterprises. The fact that there are *risks associated with market research planning, organization and implementation* in almost a third (31%) of the industrial enterprises is negative. In particular, these are risks of incorrect definition of the problem and objectives of the study (10.7%) improper planning and budgeting (41.4%), poor choice and non-compliance with the drawbacks of the methods for collecting information (19.1%), improper systematization, analysis and presentation of information (29.1%),

which inevitably leads to unrealistic presentation of the final results and making wrong decisions. This is a proof that specialists are not well-trained to carry out qualitative research, there is a lack of organizational experience and knowledge of the best practices in the area of the study, difficulties in providing funds, etc. In practice, this leads to serious negative consequences and a number of difficulties in demonstrating a particular behaviour towards market participants. The fact is that Bulgarian industrial enterprises are not able to carry out good market segmentation or choose the wrong target market.

Overall, the proportion of industrial enterprises, where there are *risks related to product management,* is small (9%). These risks are due to incorrectly specified product nomenclature and range (8.3%), limited opportunities for developing and introducing new products (61.9%), bad positioning of products (8.6%), lack of own brands (13.8%) and delays in product removal (7.4%). Unfortunately, the trend regarding the innovation activity of Bulgarian industrial enterprises remains negative. They do not find enough good conditions and resources to develop innovative products [5]. Gradually, this trend leads to limiting the achievement and maintenance of high competitiveness and to missing the opportunities to reach leading positions. Over 70% of the Bulgarian industrial enterprises prefer to take a position near an existing competitor, and only 28% – to fill the vacant competitor's position by offering a new product on the market.

At the same time, about half of the surveyed enterprises (18%) indicate that there are *risks associated with product pricing*. They are the result of reporting only the influence of economic factors and not of psychological factors in determining the price (12.3%), changes in the level and structure of expenditure (78.5%), and poor price adaptation to the specific market conditions (9.2%). Although the share of these risks is relatively low, it is worrying that enterprises inadequately and incompletely establish the impact of factors affecting the prices of the products, do not disclose reserves and opportunities for reducing costs and do not work out measures to adapt the price to the specific market conditions [7].

Bulgarian industrial enterprises find *risks associated with the distribution policy* (42%) the most difficult. These arise due to a wrongly designed and implemented distribution policy (12.6%), poor choice of a distribution channel (44.7%), unjustified determining of the common distribution strategies (15.5%), and inadequate development of the distribution plan, programmes and events (27.2%). Therefore, Bulgarian industrial enterprises cannot achieve good management and organization of their product flows and ensure their effective delivery to consumers. They fail to reduce the time and cost of delivery, control the output, optimize the structure and relationships between the parties in the exchange process, as the distribution chain, which they apply, is long and involves a large number of specialized distributors (intermediary units). In this sense, industrial enterprises have difficulties in managing distribution, which in turn influences their behaviour on the specialized markets.

At the same time, more than half of the industrial enterprises in Bulgaria (53%) experience *external risks*. They are due to a non-compliance with the contract terms by the supplier or intermediaries, unfair competition, presence of political instability, new international treaties and agreements, changes in consumer requirements, preferences and habits, migration processes, demographics, traffic accidents, etc. For 47% there are *internal risks* arising from the specifics of the industrial enterprise business activities. They are usually associated with non-implementation of the production programme, lowered or no control over product quality, use of worn out and obsolete equipment, worsened financial situation, problems in supply, etc.

It is noteworthy that the risks associated with market behaviour are *anticipated* for 44.6% of the industrial enterprises, and *predictable* – for about 27.2%. This is mainly due to the fact that these enterprises make predictions, analyses and evaluations by gathering, processing, systematizing and analyzing information regarding risks. In particular, the factors shaping the risk situation are traced, which helps to identify them more accurately, i.e. risks are predicted on the basis of previous experience. Therefore, the likelihood of occurrence of these risks, i.e. the frequency and weight of any losses and damages from them, as well as the possible sources can be predetermined and the causes eliminated by implementing specific measures to counteract and mitigate their negative consequences.

An alarming finding is that risks are *unpredictable* for almost a third (28.2%) of the industrial enterprises, i.e. these are risks that are difficult to foresee and the probability of their occurrence cannot be premeasured due to their nature, which makes them difficult to assess. This fact impedes both the provision of prompt and timely response in case of unfavourable market situations and the demonstration of adequate market behaviour.

It should be borne in mind that *dynamic risks* are of great importance for the demonstration of certain market behaviour by Bulgarian industrial enterprises. These risks are of varying frequency and intensity of occurrence (see Fig. 2). The following risks have the most constant frequency of occurrence – *an increase in competition and changes in public needs as well as an increase in receivables from contractors and third parties*.

It should be noted that these risks are external for industrial enterprises, which further impedes tracking, analyzing, and assessing them, hence, predicting and implementing adequate ways of reducing and neutralizing them. The dynamic occurrence of this group of risks

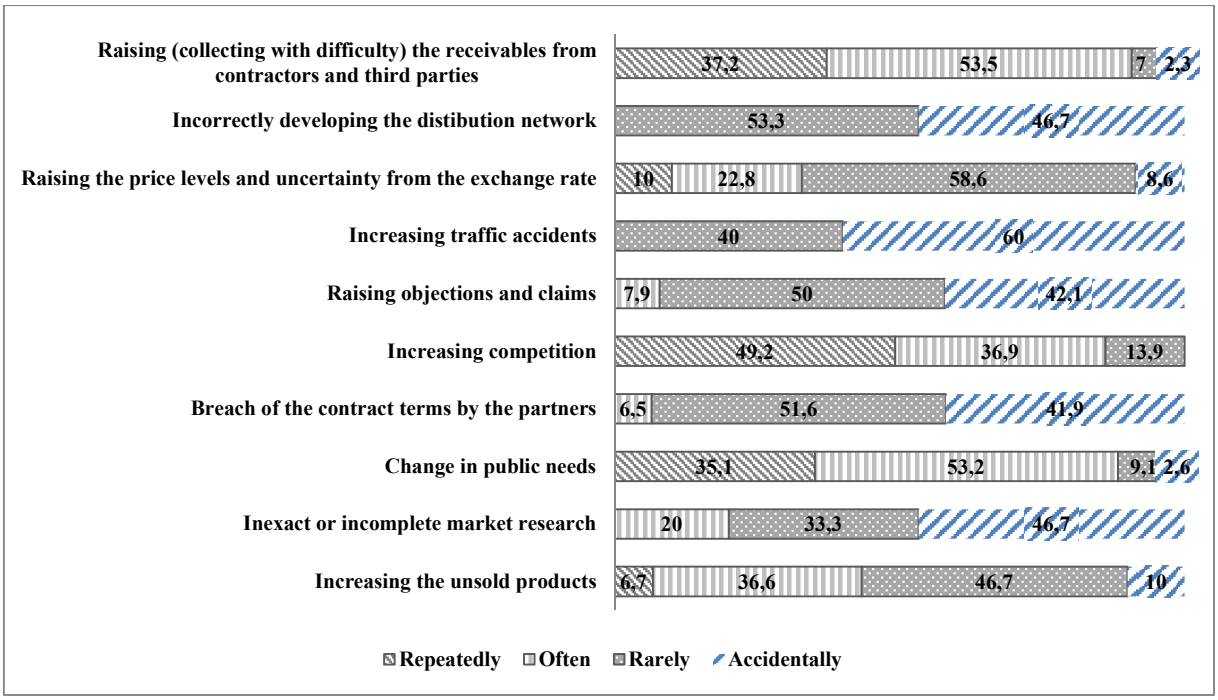

Fig. 2. Structure of Bulgarian industrial enterprises according to the frequency of occurrence of risk situations regarding their market behaviour

leads to unfavourable characteristics and dimensions of market positioning, company reputation and public image, the competitive power of the product portfolio and of industrial enterprises as a whole, their cash flows and financial results.

Regarding *competition* as the major risk is not accidental, since with the liberalization and opening of markets the global competition becomes more intense both in terms of product proposals and the development of marketing strategies [2]. This inevitably affects the positioning of the products of Bulgarian industrial enterprises and leads to demonstrating certain behaviour on the market. Bulgarian industrial enterprises offer their products both on domestic and international specialized markets. Small entities (including micro entities) sell their products mainly on the domestic market, while the production of medium- and large-size enterprises is predominantly export-oriented. The share of economic entities whose production is sold both on domestic and international markets is 65.5%, while 34.5% of them are focused entirely on domestic markets. The main export markets are the EU Member States – Greece, Romania, Germany, France, Great Britain, Italy, Austria, as well as the non-EU countries – Turkey, Macedonia, Serbia, and Russia, which further strengthens competition and puts Bulgarian industrial enterprises at risk.

At the same time, the fact that industrial entities in Bulgaria comply with the *change in public needs* substantially contributes to the existence of negative indications and to the increase in their risk exposure. A large number of Bulgarian industrial enterprises (77%) switch to behaviour that can guarantee them greater security and flexibility in conditions of changing public needs. They aim at changing and expanding their product range and nomenclature, in order to keep and develop their market positions. Moreover, the majority of industrial enterprises offer additional variety of extras (possibilities) to their customers as due to a reduced ability to pay, they are becoming more rational and more careful in their choice of goods.

One of the biggest risks, related to the market behaviour of industrial enterprises in Bulgaria, is the *increase in receivables from contractors and third parties*. This risk raises a number of difficulties, some of which, to a certain extent, affect the development, survival, and the prospects of industrial enterprises. It creates a chain reaction that will inevitably lead to a shortage of working capital, needed to maintain current production activities, and timely covering of costs related to producing and selling products [3]. At a certain extent all this negatively affects the production activities of enterprises and the provision of sufficient funds for the full payment of their debts. There is an extremely high level of cash deficit and at the same time a low level of liquidity, which further impedes Bulgarian industrial enterprises to timely and adequately demonstrate a market behaviour that provides the implementation of the company's intentions.

It should be borne in mind that the other risks are relatively static. They occur comparatively rarely or are accidental, but they should not be underestimated, neglected or uncontrolled. Otherwise, due to the high dynamics, uncertainty and complexity of the environment in which industrial enterprises operate, they could increase their size and power of influence, which will

lead to serious negative consequences in the adoption of a particular pattern of market behaviour.

The data in the study shows that the effects of risks, associated with market behaviour, are of marked *financial nature* for Bulgarian industrial enterprises (see Table 2). Dominant are the risks which generate losses, leading to problems with their coverage and to reducing the positive financial result. This invariably results in negative financial effects and a number of lost profits for industrial enterprises. Such manifestations affect the implementation of the marketing objectives (in strategic and tactical aspect), hence – the overall activity of the industrial enterprise.

Table 2

Extent of the consequences of the risks occurred regarding the market behaviour of Bulgarian industrial enterprises

Extent of the consequences		Respondents Share, %
High risk	Financial consequences for the organization lead to significant losses and a negative financial result	40.5
	Affects the parties concerned to a great extent	13.1
	Significantly affects strategic objectives	5.9
Medium risk	Financial consequences give rise to losses which lead to problems related to covering them and to reducing the positive annual financial result	45.2
	Moderately affects all parties concerned	15.5
	Moderately affects strategic objectives	40.5
Low risk	Financial consequences for the enterprise find expression in slight losses and do not affect significantly the annual financial result	14.3
	Affects at a very low extent the parties concerned	16.7
	Slightly affects the strategic objectives of the enterprise and its daily activities	17.9

In this regard, it is necessary to develop and implement an adequate and reasonable system of risk management, which enables the achievement of a timely response to the occurrence of unfavourable market situations and the use of adequate tools to counteract specific risks as well as to limit and reduce the unfavourable effects of their occurrence. This management system should be oriented to effective protection (mostly economic) of the industrial enterprise from unwanted intentional or accidental events as a result of the demonstration of a specific behavioural pattern of target markets, which cause certain disadvantages, damages, and losses. For this purpose, it is necessary to deeply and objectively study, analyze and monitor the development of the existing risks, which would limit or prevent the demonstration of risky market behaviour. It is necessary to gain knowledge of the areas at high risk, to carry out science-based analysis and assessment of the degree of risk, and on this basis to develop a preventive mechanism. This will help to outline the direction, to focus efforts, to define the vision and priorities of the industrial enterprise regarding the formation of adequate market behaviour.

Creating a clear vision for the management of risks, associated with market behaviour, enables the achievement of a number of positive effects and adequate positioning in the context of rapid and difficult to forecast changes in the behaviour of the major market participants. Practically, this means building effective risk management, allowing early identification of potential risks and implementation of successful preventive activities. Regardless of the established theoretical formulations and models of implementing market behaviour and policy in the field of risk management, a fundamental principle for achieving success is the pursuit of individual approach. Adequate and reasonable policy is needed as well as a wise use of appropriate tools, consistent with the state and potentialities of the entity. Practically, the focus should be on the following:

– developing a strategy for market behaviour risk management, which will facilitate the achievement of the enterprise's objectives;

– integrated and effective management of risks related to the market behaviour, and providing useful results for the operational management;

– studying stochastic phenomena of specialized markets and market participants;

– strengthening the organizational culture and achieving understanding by the managers at all levels of the need and benefits of their active participation in the activities related to market behaviour risk management;

– increasing the knowledge and expanding the skills of all participants in the process of risk management;

– motivating participants, enhancing the dissemination of best practices in risk management;

– stimulating the introduction and implementation of adequate and effective control mechanisms regarding the implementation of the risk management strategy;

– streamlining the process, updating the approaches, methods, tools, and instruments used to manage market behaviour risks;

– ceasing activities, accompanied by negative and insoluble risks or avoiding activities which are known to cause risks of an unacceptable level or are not subject to treatment;

– faster implementation of measures and restrictions, leading to the elimination or reduction of the negative impact of market behaviour risks;

– transferring the risk to a specialized institution that assumes responsibility for a full or partial compensation of the effects of market behaviour risks;

– expanding the field of implementation and the sources of corporate earnings, hence reducing the risk;

– creating own (internal) reserve funds to cover the damage that occurred as a result of the demonstration of corporate behaviour on the market or markets;

– using modern forms of joint businesses through which industrial enterprises can transfer their market behaviour risks to the other party (partner) in order to share the responsibility for any consequences of their occurrence, etc.

For Bulgarian industrial enterprises, proper risk management is a key factor, having great influence on the following: raising the level of manageability of businesses; reducing opportunities for speculation; improving the quality of decision making; increasing the effectiveness of forecasting, including by the way of accumulating an information base of the existing risks; providing company associates with a set of comprehensible and clear criteria to assess potential risks; using a system for assessing the implementation of the tasks in the field of risks as a tool to motivate staff, etc.

Conclusion. The development and implementation of an adequate system of risk management enables industrial enterprises in Bulgaria to cope with a great number of challenges and hazards associated with their market behaviour. They will be able to limit the difficulties more precisely and faster and isolate the weaknesses in their operation; they will also implement policies, providing the achievement of better business results and demonstrate a more flexible and competitive model of market behaviour. Otherwise the problems of Bulgarian industrial enterprises would deepen.

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Іванова, З. С. Ризики, пов'язані з ринковою поведінкою болгарських індустріальних підприємств

Болгарські індустріальні підприємства функціонують в умовах виключної конкуренції глобальних ринків. Це безумовно збільшує ймовірність настання безлічі ризиків та збільшує ступінь впливу ризику. Ціль даної статті – виявити деякі з основних ризиків, що супутні демонстрації відповідної ринкової поведінки з боку болгарських індустріальних підприємств, надати результати аналізу впливу ризику та проблемні області їх ринкової поведінки, а також обґрунтувати можливості впливу на ризики.

Ключові слова: ризик, управління ризиком, ринкова поведінка, болгарські індустріальні підприємства, цільові ринки, бізнес середовище.

Иванова, З. С. Риски, связанные с рыночным поведением болгарских индустриальных предприятий

Болгарские индустриальные предприятия функционируют в условиях исключительной конкуренции глобальных рынков. Это неизбежно повышает вероятность наступления множества рисков и увеличивает их степень подверженности риску. Цель настоящей статьи – выявить некоторые из основных рисков, сопутствующих демонстрации определенного рыночного поведения со стороны болгарских индустриальных предприятий, представить результаты анализа подверженности риску и проблемные области их рыночного поведения, а также обосновать возможности воздействия на риски.

Ключевые слова: риск, управление риском, рыночное поведение, болгарские индустриальные предприятия, целевые рынки, бизнес-среда.

Ivanova, Z. S. Risks Associated with the Market Behaviour of Bulgarian Industrial Enterprises

Bulgarian industrial enterprises operate in extremely competitive global markets. This inevitably increases the likelihood of the occurrence of a number of risks and increases their level of risk exposure. The purpose of this article is to highlight some of the main risks accompanying the demonstration of a certain market behaviour of Bulgarian industrial enterprises, to present the results of analyzing the risk exposure and the problem areas in their market behaviour, and to justify the opportunities for affecting the risks.

Keywords: risk, risk management, market behaviour, Bulgarian industrial enterprises, target markets, business environment.

Received by the editors: 24.11.2015
and final form 28.12.2015

UDC 334+339.92

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INVESTIGATION OF THE INTEGRATED TRADE STRUCTURE ENVIRONMENT USING AGENT-ORIENTED APPROACH

Ukraine economic reforms make changes for improvement in all spheres of economic activity (including retail trade, that plays an important role in the socio-economic development and meeting the needs of each person). One of the factors of these changes is strengthening integration and the emergence of new organizational structures such as integrated commercial structure.

However, sustainable growth of trade and commerce and such new formations as integrated structures is impossible without effective management of trade enterprises. Taking into account that all enterprises are in constant interaction with their environment and take the initial resources for their livelihoods from it, therefore it becomes especially important to observe the structure of environment and existing relationships among all entities that are able to influence integrated trading company.

Reviewing the literature. The activities of integrated structures often become the object of attention by domestic and foreign scientists. There have been several investigations made by such scientists as: O. I. Amosha, V. M. Geiets, N. G. Mitsenko, G. O. Pasichnik, A. A. Pilipenko, L. I. Fedulova, O. Yu. Chorna. But considerable attention has been paid to industrial enterprises, rather less research has been devoted to integrated commercial structures and their features.

Many recent studies in the economic literature have focused on the external environment and its impact on the enterprise activity (N. O. Vlasova, B. V. Griniv, S. M. Iliashenko, O. S. Kravchenko, N. P. Liubushin, L. O. Ligonenko, A. A. Mazaraki, Yu. S. Tsal-Tsalko). But in their research, they do not account for the activity of all the participants in the external environment and dynamic development of integrated company, which is able to constantly change its structure by elements of business environments.

Therefore, the ***purpose of the article*** is to study the relationship between the integrated structure and its environment using multi-agent systems.

The important aspect of trade enterprises is the interaction with the external environment. This relationship determines the direction of influence on the efficiency of its operation. The business environment of the company (the direct impact factors) is the closest environment, which interacts with integrated structure. In scientific literature its content determine through the set of phenomena, processes and institutions with which the organization directly interacts. It is able to have some influence on the nature and content of interaction [3]. The main structural elements of the business environment are suppliers of resources (materials, capital, labor), consumers, competitors, intermediaries. That is the main goals and objectives of business organization focus on this component of environment – customer satisfaction.

In his research devoted to strategic aspects of business management O.S. Vihanskii notes that the success of the enterprise management should not be only determined by the ability to adapt to change in a rapidly changing business environment by adapting their internal structure and market behavior. Enterprises should actively create the external conditions of the activity, constantly detect threats in the environment and and the formation of active external conditions of its activities, permanent detection of threats and potential in the environment [1].

Nowadays main features of the environment, Ukrainian trade companies are [9]: multi-vector orientation and a high rates of economic change, variability and dynamism, a significant degree of risk and uncertainty. That is, in practice, the integration of business entities are often forced reaction to changing external conditions, reduction of free market competition and increasing monopolization of markets. Therefore, under these conditions economic entities need time to detect changes in the environment, identify trends, develop and implement a system of measures to eliminate or reduce the negative effects

Environmental Influences on an integrated trading company, requires prior definition features of this interaction. We distinguish the following features:

1. Conditional distribution of the internal and external environment. A lot of factors that are external to the individual entity, in conditions of integration is simultaneously internal. Therefore it is difficult to draw a distinction between internal and external environment [8].

2. The interdependence of agents internal and external environment. According to O. A. Tretiak, integrated trading environment structures in contrast to con-

ventional commercial enterprises are not represented by a set of relatively autonomous entities that economically separated from each other. It is represented by a set of interdependent objects that structuring the product markets based on the optimization of supply chains flow of goods to the end user [11, c. 85].

3. Active behavior of the environment with respect to the commercial enterprises.

So, given the above, it is expedient to use multi-agent systems to study the mechanisms of this type of business and to create the models of their operation and development. This requires the research of relationships between sets of agents.

A multi-agent system (MAS) is a system composed of multiple interacting intelligent agents. Agents have specific roles and interact with each other to solve problems beyond the capabilities of individual agents or his knowledge [12, c. 12].

It is based on the transition from passive entities that are described as a class of objects to active entities. Active entities described as agents or patterns of a person with the following characteristics [6]:

1) autonomous: agent takes actions without interference of a human and has control over taken actions;

2) social ability: agents communicate (between themselves and/or with people);

3) reactivity: agents have some perception of environment that they are part of and may react to changes in the environment;

4) activity: agents may take actions to change their environment in order to achieve their goals.

The integrated structure of multi-agent simulation can be represented by a coalition (groups of cooperative agents, working together on a given task, short-lived and goal-directed, being a flat structure). Initially agents are independent and do not cooperate.

The advantages of the coalition formation is [Coalition formation in multi-agent systems—an evolutionary approach]

1. Any-time solution with worst case guarantee.

2. Distributed algorithm.

The basis of the coalition is a joint dominant orientation of purposes agents.

Coalition integrated structure can be determined by two types of agents – agent coordinator (coordination center of integrated trading companies) and agent-enterprise (participants of integration).

Agent enters the coalition, and thus takes part in the integration because of the need to achieve its goals of dominating (goals active object with the highest priority at this time [5]), and to find in this direction (agents with similar parameters of goals). Merging into one coalition resources and agents become common.

For each agent of multi-agent system of integrated commercial enterprise let us describe the overall structure as follows: the name, the set of properties, input-output (Fig. 1).

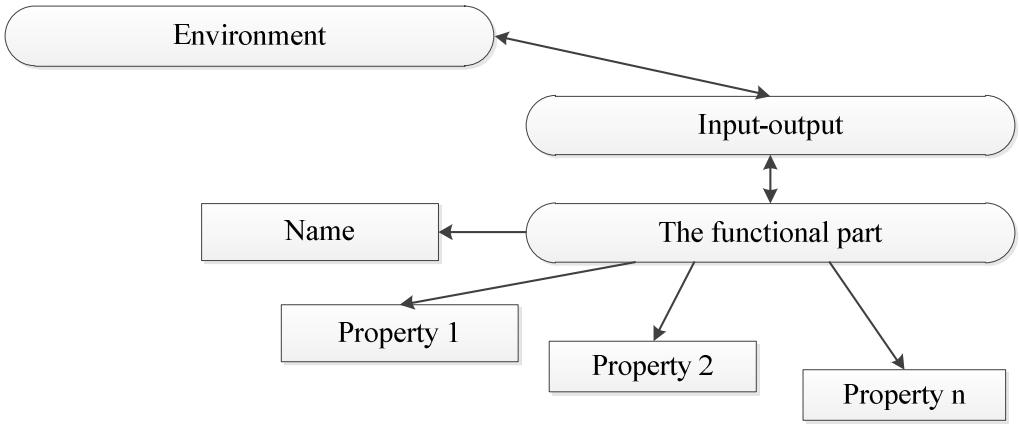

Fig. 1. The agent structure [10]

This allows on one side segregate them from each other and on the other to determine the types of relationships between objects of the environment. This set of environmental agents integrated structure represented by the set of agents-suppliers, agents-customers, agents-competitors, agents-government agencies and local governments, and agents-subjects of market infrastructure.

The structure of market infrastructure Mitsenko NG provides classified [7, p. 21],

The structure of market infrastructure Mitsenko NG offer to classified as follows [7, p. 21]: wholesale and food markets, agro-industrial, commodity and commodity exchanges, auctions, trading houses, agents, international trade broker, logistics and transport companies, financial institutions and insurance companies, educational institutions, research centers, advisory and consultative structures.

In terms of interaction in multi-agent systems, the relationship between actors of the external environment and integrated trading company can be represented by its architecture. The architecture is an abstract description of a system. It controls and coordinates the interaction between agents system structures their activities to achieve the desired behavior. The architecture of multi-

agent systems is seen as "a set of actors which are located in appropriate relations with each other and taking part in regular institutional forms of interaction with other actors" [13]. That's why the architecture of multi-agent system is given by a set of agents, behavior and functions defined by means of fuzzy rules.

Given the highlighted features of the environment of the integrated commercial enterprise it is appropriate to introduce a definition of potential coalition. The need for this definition caused by the fact that competitors, customers and suppliers can join the integrated structure resemblance wen they have when the same basic parameters of the dominant goals. that agents of the environment become agents in the internal environment. So agents of external environment become the agents of the internal environment. So potential coalition will be called the set of external environment agents in which the parameters of the dominant goals most close to the parameters of the dominant coalition goals.

Thus, there is a model of multi-agent architecture structure (Fig. 2). For selected agents of external and internal environment it is characterized by the following types of relations R:

r_1 – management processes;

r_2 – process of information transmission;

r_3 – the process of finding potential suppliers of goods and services;

r_4 – processes of providing goods and/or services;

r_5 – Integration Processes.

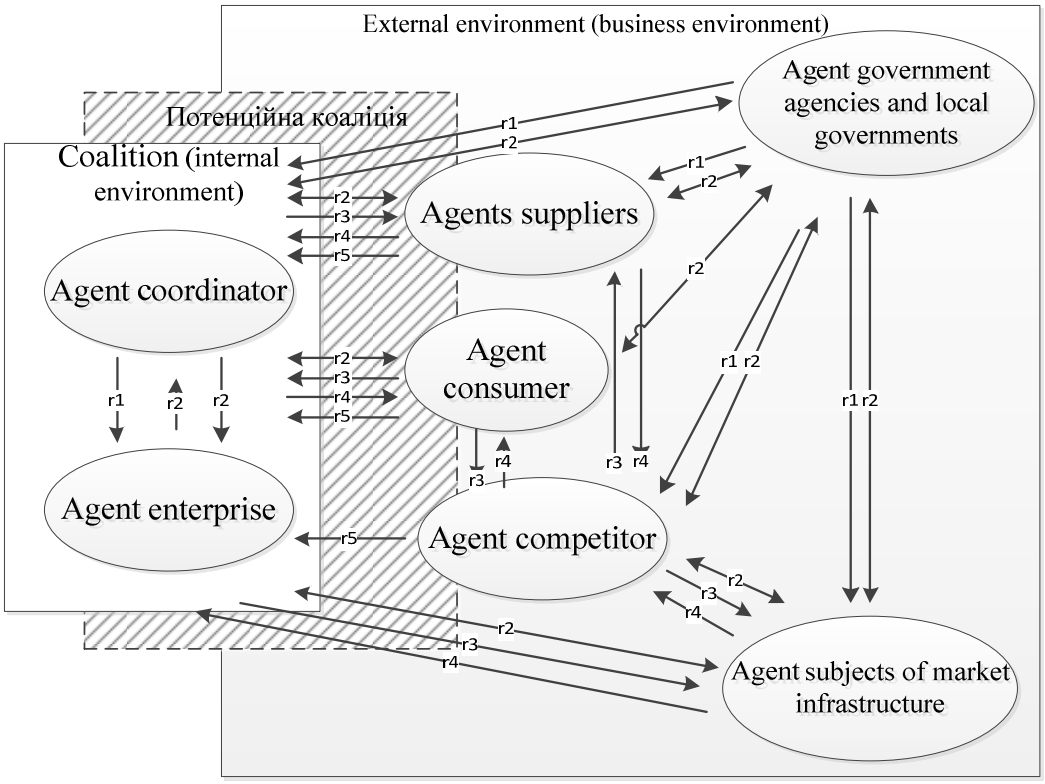

Fig. 2. Architecture of multi-agent systems of integrated commercial structure

The set of management processes occurs between such types of agents:

1) unilateral relation "Agent coordinator" – "Agent-enterprise", which describes the process of coordination and control over the activities of entities, sets rules of conduct for actors and functions of interaction with other actors in the environment;

2) unilateral relation "Agents-government agencies and local governments" – "Coalition", "Agents-government agencies and local governments" – "Agent competitor", "Agents-government agencies and local governments" – "Agents-suppliers", which defines the legal and regulatory framework of retail.

In the scientific literature, the main objectives for the regulation of commercial establishments are [2, c. 223]: development, adoption, control of normative legal acts, that providing the legal basis; protection of interests and trade enterprises development; realization of state policy on development of wholesale and retail trade enterprises as well as trade and production sector through the use of market mechanisms of management; determination of the appropriate price level and the amount of trade margins; regulation of terms and conditions of storage and sale; marking and exchange of goods; regulations of the sale of certain products; control over compliance with health standards trading.

The set of process of information transmission occur between these types of agents:

1) bilateral relation "Coalition" – "Agent consumer". The existence of this type of relation stems from the fact that the trading company supplying products to the consumer market, providing consumers with necessary information about the characteristics of the goods, their warranty terms, conditions of sale, reliability and so on. From the consumer receives feedback information about the competing products, needs and capabilities of customers, volumes and sales rates.

2) bilateral relation "Agent enterprise" – "Agent coordinator" associated with the need to exchange information about sales volumes and needs of stores that are part of an integrated structure. At the same time coordinating center sends to each enterprise analytical information.

3) bilateral relation "Coalition" – "Agents-government agencies and local governments". The information base that results from information integrated connection between trade structure and government are: official publication of government agencies and local government, statistical reporting.

5) bilateral relation "Coalition" – "Agent subjects of market infrastructure".

The result of information interaction of these objects is scientific research in the field of trade, reviews of market conditions, analytical reviews published in specialized economic journals and periodicals, presentations, symposiums, conferences, promotional materials, scientific publications, marketing reports, results of sample surveys and observations that contain information about the status and dynamics of the basic parameters of environmental factors of market infrastructure.

Process of searching for potential suppliers of goods and services relate to the request to provide the product or service and are determined by the presence of unilateral relations between following groups of agents as: "Coalition" – "Agents-suppliers", "Agent consumer" – "Coalition", "Agent consumer" – "Agent subjects of market infrastructure", "Agent competitor" – "Agents-suppliers", "Coalition" – "Agent subjects of market infrastructure", "Agent consumer" – "Agent competitor".

The result of a request for services or purchasing products is the resultant unilateral request r_4, inverse to the relation r_3.

Integration processes combine those actors which are identified in the potential coalition can be attached to the integrated structure.

Thus, the proposed model of multi-agent system architecture of integrated commercial structure allows you to identify interrelationships between all actors in the environment, and further define the structure of each type of agents will promote the construction of ontological models of integration processes of commercial enterprise, identifying the mechanisms of their development and functioning.

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Рогоза М. Є., Вергал К. Ю. Дослідження зовнішнього середовища інтегрованої торговельної структури за допомогою агентно-орієнтованого підходу

У даній роботі запропоновано використання агентно-орієнтованого підходу до дослідження зовнішнього середовища інтегрованої торговельної структури як відкритої динамічної соціально-економічної системи, що взаємодіє із значною кількістю суб'єктів господарювання, здійснює обмін значними масивами інформації. У статті виділено групи агентів у складі зовнішнього середовища інтегрованого торговельного підприємства, встановлено види зав'язків між ними. Запропоновано використання поняття «потенційна коаліція» для характеристики тих агентів, які за зміни умов можуть приймати участь у інтеграційних процесах.

Ключові слова: інтеграція, інтегрована структура, торговельне підприємство, агенти, мультиагентна система.

Рогоза Н. Е., Вергал К. Ю. Исследование внешней среды интегрированной торговой структуры с помощью агентно-ориентированного подхода

В данной работе предложено использование агентно-ориентированного подхода к исследованию внешней среды интегрированной торговой структуры как открытой динамической социально-экономической системы, которая взаимодействует с большим количеством субъектов хозяйственной деятельности, осуществляет обмен значительными массивами информации. В статье выделены группы агентов в составе внешней среды интегрированного торгового предприятия, установлены виды связей между ними. Предложено использование понятия «потенциальная коалиция» для характеристики тех агентов, которые при изменении условий могут принимать участие в интеграционных процессах.

Ключевые слова: интеграция, интегрированная структура, торговое предприятие, агенты, мультиагентная система.

Rogoza M., Vergal K. Investigation of the Integrated Trade Structure Environment Using Agent-oriented Approach

In this paper, proposed the use of agent-based approach to the investigation of the integrated trade structure as an open dynamic socio-economic system that interacts with a large number of entities and business activities, exchanges substantial amounts of information. The article highlights the group of agents as a part of an environment of integrated commercial enterprise, established types of relationships between them. It is proposed to use the term "coalition potential" to describe the agents that may take part in integration processes.

Keywords: integration, integrated structure, traders, agents, multi-agent system.

Received by the editors: 30.11.2015
and final form 28.12.2015

UDC 658.783+339.144+519.86

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ANALYSIS OF MATHEMATICAL METHODS AND MODELS WHICH ARE USED FOR THE PROCESS OF MANAGEMENT OF COMMODITY STOCKS IN RETAIL TRADE

Statement of the problem. The urgency is determined by the necessity of the increase of the efficiency of management of commodity stocks and also the increase of competitiveness – the most important condition of scientific and technical reformation of the economic states in the world. Market system of economic relations generates new queries and promotes the interest to potential possibilities of scientific researches in the field of wholesale and retail trade. It is one of the spheres with which masses of population contact every day.

The urgency of this research consists in the expansion of application of mathematical and instrumental methods and models of the economy through their modification and distribution on a wider range of real economic situations with the aim of overcoming the existent limitations on a number of parameters.

Analysis of basic researches and publications. The problems in relation to forming of commodity were worked out by Z.V. Alfereva, E. M. Anisimova, B. A. Balash, O. S. Balash, O. E. Bashina, U. A. Belyayev, D. Bukan, V. O. Dick, V. O. Dybska, M.E. Zal-manova, S. M. Kolesnikov, V.L.Lenshin, M. R. Linders, A.L.. Margolin, E. A. Mikhailov, U. M. Nerush, V. O. Nikolaichuk, A. R. Radionov, Y.A. Rechkalov, R.V. Savinov, A.A. Spirin, L.A. Fedorov, R.P. Fomin, Zh. P. Shilova. Their works serve as the foundation for further researches in the area of perfection and modification of mathematical and instrumental methods and economic models.

Unsolved constituents of a general issue. However the question of management of commodity stocks remained investigational not enough, as the existent methods allow not estimating it comprehensively.

Formulation of the aim of the article. The aim of the article consists in consideration and analysis of the existent mathematical methods and models which are used for the process of the management of commodity stocks in a retail business.

Stating of basic material of the research. Commodity stocks (CS) are products which are in the sphere of distribution chain (in the warehouses of productive enterprises, trade and sale organizations and retail trade network and in transit) and are intended for realization.

CS is the necessary condition of continuity of the productive process. CS appears at all stages of the motion of commodities in the warehouses of productive enterprises, in transit, in the warehouses of wholesale and retail trade organizations and enterprises.

For managing commodity stocks the following methods are used:

1. Periodic method (the regulating system with the fixed periodicity of order). One of the most popular methods [1].

The essence of this method consists already in its name – it is the system with the fixed periodicity of order or the system of checking of supplies with periodic verification. Graphic interpretation of this method is presented on figure 1:

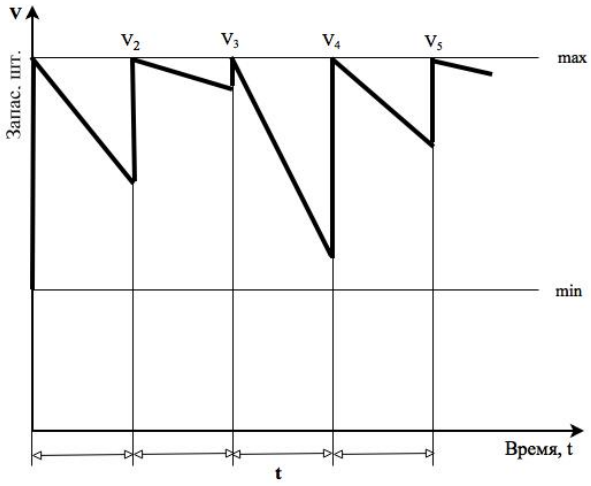

Fig. 1. The change of the level of stock at the periodic method of regulation

Field of application of this system:

1) not very valuable objects;

2) low expenses on storage;

3) insignificant expenses even if stocks are finished;

4) relatively permanent level of inquiry;

5) small expenses on materials and their proportional expense;

6) not high transport-purveying expenses.

Simplicity (regulating only one time during the whole interval - it is not needed to conduct regular account of supplies) is the advantage of this method.

The defects of this method are the danger of exhausting of stocks at their intensive unforeseen consumption. The second defect is the necessity to do an order even on the negligible quantity of materials (it results in additional expenses).

2. Relaxation method (the system of regulating stocks with the fixed quantity of order). It is also one of the most popular methods [1].

The essence of the relaxation method consists in permanent (daily) control after the level of supply and its short-term prognostication. The system of regulating

of stocks with the fixed quantity of order also has a number of different modifications. Graphic interpretation of this method is presented on figure 2:

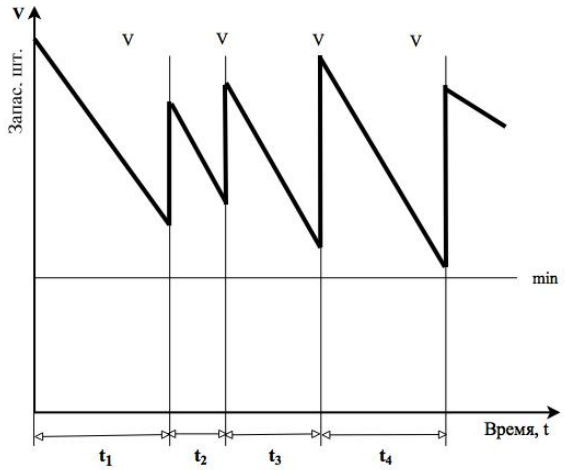

Fig. 2. The change of the level of stock at the relaxation method of regulating

Fields of application :

1) high cost of materials;
2) high expenses of storage;
3) high level of the losses in case of deficit;

The advantage of this system is that the materials come with identical batches which decreases the expenses from delivery and the content of supply.

The defects consist in the fact that it is necessary to take systematic continuous control of stocks which increases expenses related to its regulation.

3. The two-level system of regulating of stocks (the system of maximum-minimum) [3]. It is characterized by the fact that the possible level of stocks is regulated both from upper and from lower: except a maximal (upper) level to which the supply of stock is fulfilled, the lower level is set – the point of order. If the quantity of stock is decreased to this lower level (critical level) before the completion of the set period of order, then out of turn order is done. Graphic interpretation of this method is presented on figure 3.

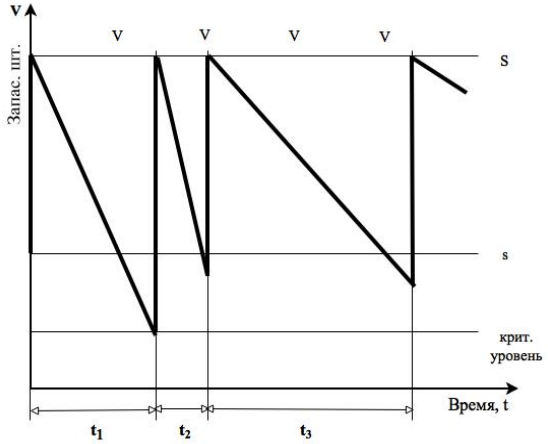

Fig. 3. The change of the level of stock at the two-level system

Field of application :

1) in situations, where it is necessary to take into account the delay of delivery;

2) oriented to the situation, when expenses on the warehouse and stocks are compared, id est they are considerably lower than possible expenses in case of stopping of the production.

The advantages are the exception of the possibility of shortage of the materials defects to the term of the next delivery; however in this system filling of stocks can be conducted regardless of actual expense of stocks. The second advantage of this method is providing of the support of the system in the non-deficit state.

The main defect is the necessity of conducting the permanent watching of the level of stocks.

Let's consider the existent models which are used for management of commodity stocks:

If the investigated quantity in the model can be presented as an analytical formula or a system of formulas, then the determined models are used. The determined models are classified on static and dynamic.

One of the elementary models, from the point of view of mathematics, are *static models*. It is foreseen that at formulation of static economical-mathematical model, all dependences are set to one moment of time, and the designing system is unchanged in time [5].

Therefore for the economical-mathematical modeling there is a typical situation, when static models are developed at first and then they become complicated by introduction of the factor of time, id est are transformed into dynamic.

Static characteristics can be presented:

- by the mathematical model of the type of $Y = F(X)$;
- by the graphic model.

The examples of static model for management of commodity stocks are one food static model. One food static model assumes a deficit and also a number of products with limits of the capacity of storage facilities [5].

Dynamic models (models of dynamics) are the process of changes of the states of real or designed system. They show the differences between the states, the sequence of changes of the states and the development of events in the course of time.

Mathematical description of dynamic models is conducted as a rule:

- by the systems of differential equations (where time comes forward as a continuous variable);
- by difference equations (where time is a discrete quantity);
- by the systems of ordinary algebraic equations.

The examples of a dynamic model for management of commodity stocks are a model for the absence of expenses on the processing order and a model with expenses on the processing order.

The above mentioned models are applied in the condition of definiteness, but the necessary information is not always described by an analytical formula or sys-

tem of formulas. If there is no one a probabilistic model is used.

A probabilistic model (stochastic model) is such an economical-mathematical model where parameters, conditions of functioning and characteristic of the state are presented by casual quantities and are connected by stochastic (id est casual, irregular) dependences or initial information is also presented by casual quantities [6].

While working out a stochastic model, methods of cross-correlation and regressive analyses and other statistical methods are used [4].

The examples of stochastic models on managing trade stocks is a model with fixed volume of order and a conception of the level of service, a model with fixed periodicity and a conception of the level of service [7].

Conclusions of this research and prospects of the further research in this direction. Analysis of the existent mathematical methods and models has been done. The table of descriptions of methods which are used for management of commodity stocks has been made up. Advantages and defects have been considered, certain field of application has been defined.

The model of management of stocks is classified by the character of the demand which can be determined or probabilistic. The types of models of management of stocks depend on the character of the demand as shown on figure 4:

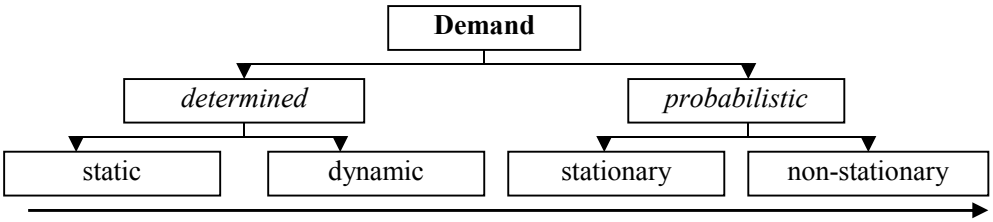

Fig. 4. Types of models of management of stocks depending on the character of the demand

The determined demand depending on the factor of time is divided into static (does not depend on time) and dynamic. Probabilistic demand can be stationary, id est the consistence of probability of the demand does not change in time and is non-stationary when the function of consistence of the distribution of the probability of the demand changes in the course of time.

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Івченкова О. Ю., Лях А. О. Аналіз математичних методів і моделей, які використовуються в процесі управління товарними запасами в роздрібній торгівлі

У статті розглянуто поняття товарних запасів, роль у підприємницької діяльності. Автори зробили порівняльний аналіз існуючих математичних методів з наступним формуванням таблиці. Складена схема класифікації математичних моделей з управління товарних запасів.

Ключові слова: товарні запаси, управління товарними запасами, рівні ньому запасу, періодичний метод, релаксаційний метод, дворівнева система регулювання запасів.

Ивченкова Е. Ю., Лях А. А. Анализ математических методов и моделей, которые применяются для процесса управления товарными запасами в розничной торговле

В статье рассмотрены понятие товарных запасов, роль в предпринимательской деятельности. Авторы сделали сравнительный анализ существующих математических методов с последующим формированием таблицы. Составлена схема классификации математических моделей по управлению товарных запасов.

Ключевые слова: товарные запасы, управление товарными запасами, уровнем запаса, периодический метод, релаксационный метод, двухуровневая система регулирования запасов.

Ivchenkova H. Y., Lyakh A. O. Analysis of Mathematical Methods and Models which are Used for the Process of Management of Commodity Stocks in Retail Trade

The article discusses the concept of inventory, role in a company's activities. The authors made a comparative analysis of existing mate-automatic methods, followed by the formation of the table. The scheme of classification of mathematical models for the management of inventory.

Keywords: inventories, inventory management, level of inventory, a periodic method, relaxation method, two-level system of regulation of stocks.

Received by the editors: 04.12.2015
and final form 28.12.2015

UDC 658.7

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STUDY OF FORMATION AND CONTENT OF THE TERM 'LOGISTICS ACTIVITIES': THEORETICAL ASPECTS

Introduction. A logistics activity is one of the most important components of the business enterprise operation; it includes direct logistics functions and logistics processes, as well as logistics operations.

The regulatory and legal framework lacks an appropriate definition of logistics as an activity at the national level, which leads to its improper reflection in statistical accounting forms. This does not allow assessing the efficiency of logistics operations or their impacts on the national economy. Logistics costs and their amount are not recorded in the existing forms of accounting. In the National Classification of Economic Activities DK009:2005, logistics activities are "scattered" and presented as separate functions and operations in different sections, subsections and groups of economic activities. The existing form of the Classifier does not provide entering logistics activities as an item of an account, given its intersectoral and synthetic nature [1, p.152; 13, p.290].

Analysis of recent research and publications based on the problem under consideration. Distinguishing the types and identifying the contents of various logistics activities were done by V.G. Alkema, N.V. Kovalchuk, N.Y. Konischeva, V.L. Pylyushenko, A.V. Tkachova, G.R. Rudenko, O.M. Sumets.

Thus**, object of the paper is** an investigation of the theoretical aspects of forming the term 'logistics activities' and developing its content.

Research methodology. Our research is based on a system approach using general scientific methods: generalization, analysis and synthesis. We used abstract-logical method for making conclusions.

Problem description. A careful study of the 'logistics activities' definition was done by famous scientists V.G. Alkema and O.M. Sumets who formulated the 'business card' of logistics activities, which contains the definition, goals, objectives, direction, subjects and objects, effectiveness criteria, and types of logistics activities [1; 13].

Effective organization of logistics activities in the enterprise will facilitate its rhythmic work and optimize the business activities, providing a sustainable competitive advantage for the company; this will allow timely execution of contracts as well as prompt and flexible respond to any changes in demand.

We agree with V.G. Alkema who says about the lack of a unified approach to the definition of the term "logistics activities"; this is proved by various alternative definitions, such as logistic function, company logistics, types of logistics activities, logistics process and so on. Scholars have different views on types of logistics activities; there is no common understanding of the objects of logistics or the classification of its subjects and constituents, etc [1, p.152].

Table 1 shows the most common definitions of logistics activities that occur in scientific publications and periodicals. By 'definition' we mean a form of reflection of the universe using language means for generalization of objects and phenomena in the form of simplest abstractions by which facts can be systematized and summarized [1, p.148].

Table 1

Approaches to the definition of logistics activities

Definition	Author
1	2
Activities for a systematic improvement of flow processes at the enterprise in order to reduce costs and improve customer service. The main activities in focus are supply, production, marketing, storage, transport and inventory management; the essence of logistics activities varies with the stage: either it is procurement, production, or sales	[10, p.70-72]
A separate economic activity that requires a sustainable process of logistics activity in the enterprise as a single industrial complex; this will minimize costs and losses due to an optimization of a logistics "chain" in the enterprise and reduce the impact of external risks	[6, p.122]
A direction of economic activity that involves the material flow management supported by the information, financial and service flow management through consistent and coordinated logistics operations based on the consistent, comprehensive, and integrated performance of all parts of the "supply - production - sales" logistics chain. The goal is to achieve a long-term success in business by maximizing the customer satisfaction, minimizing costs, meeting the interests of all	[15]

Ending of Table 1

1	2
parties to the goods turnover under the conditions of risks, volatility and uncertainty of the external environment. Logistics operations as integrated flow control in an industrial enterprise cover all of its units and functional areas - procurement, production, marketing, sales, finance, and infrastructure. The functional areas in focus are procurement, production, sales, warehousing, transportation, inventory management. The object of the company's logistics activity is a set of material, financial, information and service flows	
The process of planning and implementation of raw material flows and stocks, work in progress, finished goods and related information flow from the place of manufacture to the place of consumption in order to meet the customer's product requirements	[16, p.29]
A business function, responsible for the coordination of physical distribution and management of materials to save costs and improve the service level	[11, p.29]
A sphere of competence that combines the company with its customers and suppliers through the inventory and information flows; to maximize the strategic advantages, all the functional units are to be integrated	[2., p.51]
Activities performed in the process of moving products from the point of manufacture to the point of consumption	[12, p.18]
A set of spheres of the organization's activity, from procurement of raw materials to delivery of finished products to consumers	[7, p.23]
A set of processes of physical movement of material values (raw materials, semi-finished and finished products) within the enterprise and between enterprises and promotion of information flows that reflect the material processes and are used to manage these processes	[8, p.18]
A type of economic activity associated with the planning, organization, management and control of material and accompanying flows in the process of moving them from the place of manufacture to the point of consumption through consistent and time- and place coordinated performance of logistics activities	[13, p.292]
A set of integrated phase and functional logistics processes and operations aimed at transforming material and related flows in order to achieve a long-term success by maximizing the customer satisfaction, minimizing costs, coordination of interests of all the parties to the goods turnover in terms of effective protection against the threats of a changing and unstable environment	[1, p.152]

Source: systematized by the author.

O.M. Sumets, exploring the definition of "logistics activities", insists on highlighting the goals, objectives, target, subjects and objects, effectiveness criteria, and types of logistics activities [13, p.290]; V.G. Alkema accomplishes the decomposition of the logistics activity elements, adding the following components of logistics activities to the above constituents of the 'business card': research methods, managerial and supply aspects and organizing principles [1, p.152].

Solving problems. The author's opinion on structural and logical analysis of the mutual subordination and interrelationship of the terms that synthesize the concept of "logistics activities" coincides with the findings by O.M. Sumets who says that the category of "activity" is the base for the development of a universal philosophical methodology [13, p.291]. Activities, when examined in a social system are differentiated by objective criteria into the following types: physical, social, and spiritual activity [3, p. 243].

Material activity implemented in the procedures of interaction between man and nature in the context of production is translated into economic activity; therefore, the category of "economic activity" is subordinate to the category of "activity". In turn, production activity is also divided into types - production activity, marketing activity, logistics activity etc. Each of these activities is performed in the company through a specific function and each function is performed through a particular process or a set of processes. And, accordingly, each process is implemented through a set of operations [13, p.291].

Approaches to defining the logistics activities can be analyzed using the definitions shown in Table 1.

Firstly, in formulating goals we singled out several areas:

a) reducing costs [1, p.152; 6, p.115-116; 10, p.70-72; 11, p.29; 16];

b) improving the quality of customer service [1, p.152; 10, p.70-72; 11, p.29; 15; 16, p.29;];

c) reducing the impact of external risks [1, p.152; 6, p.115-116; 15];

d) strategic long-term benefits [1, p.152; 2, p.51].

Secondly, the objectives of logistics depend on the goal and the current situation (Table 2).

Table 2

Approaches to the content of logistics objectives

Description	Author
1) objectives of exogenous nature: Providing maximum adaptability of the enterprise to the changing market conditions; increasing their own market share; creating the conditions for obtaining competitive advantages and a long-term business success; 2) objectives of endogenous nature: reducing the costs of logistics activities in order to increase the profits; improving logistics management in the enterprise; creation of appropriate logistical capacity of the enterprise; forming an integrated utility of the products or logistics services for the consumers; improving the efficiency of the enterprise logistics system	[13, p.293]
1) formation of the optimal production program for the production and distribution system of the industrial enterprise, which follows the structure of consumer demand; 2) development of an algorithm of the program change with fluctuations in consumer demand in case of resource constraints; 3) optimization of inventory at each level of the logistics system of the company; 4) optimization of movement of the material and information flows of the logistics system; 5) optimization of total costs in the movement of material and information flows of the logistics system	[9, p.67]
1) long-term tasks concerning the process of storage and transportation; warehousing and transportation facilities; structure and processes of planning decisions; ensuring the production potential; support for innovative technologies; 2) medium- and short-term objectives concerning the use of transport facilities; production management; management of the material and technical resource movement; staff and technical device management; information exchange; innovation resources; 3) coordination of processes and scopes of activities (organizing): specialization of production; coordination of the production programs; determination of the logistic strategy; choice of technology; determination of the distribution of products; identifying the needs in production; specifying the machine loads; determining the volume of production; specifying the use of the process time; implementation of planned innovations. 4) control of the following: quality of the products; introduction of innovative technologies; staff efficiency; procurement; use of vehicles; inventory	[4]
organization and management of procurement; organization of warehousing and cargo management within the "storage space"; inventory management; organization and management of transport process; organization and management of the production process; organization and management of material flows distribution; organization and management of sales; organization and management of information flows ; organization and management of logistics operations	[5]

Thirdly, the objects of logistics activities are the components of logistics activities (phase, flow and functional processes and operations), which are characterized by a change in size, form of existence, location; they are the target for management functions as to ensure the desired efficiency of performance. The following objects of logistics activities are usually distinguished:

Material values (physical distribution) [2, p.29; 7, p.23; 8, p.18; 11, p.29; 12, p.18];

Flow processes [6 p.115-116; 10 p.70-72];

Material flows and accompanying information, financial and service flows [1, p.152; 8, p.18; 13 p.292; 15; 16, p.29].

Fourth, the subjects of logistics activities are physical and legal entities who are engaged in logistics activities and directly affect the objects in order to reach the goals by performing the specified tasks; they are logisticians, logistics operators, intermediaries, logistics centers, contractor companies.

Fifth, concerning the components of logistics activities, V.G. Alkema suggests distinguishing the fol-

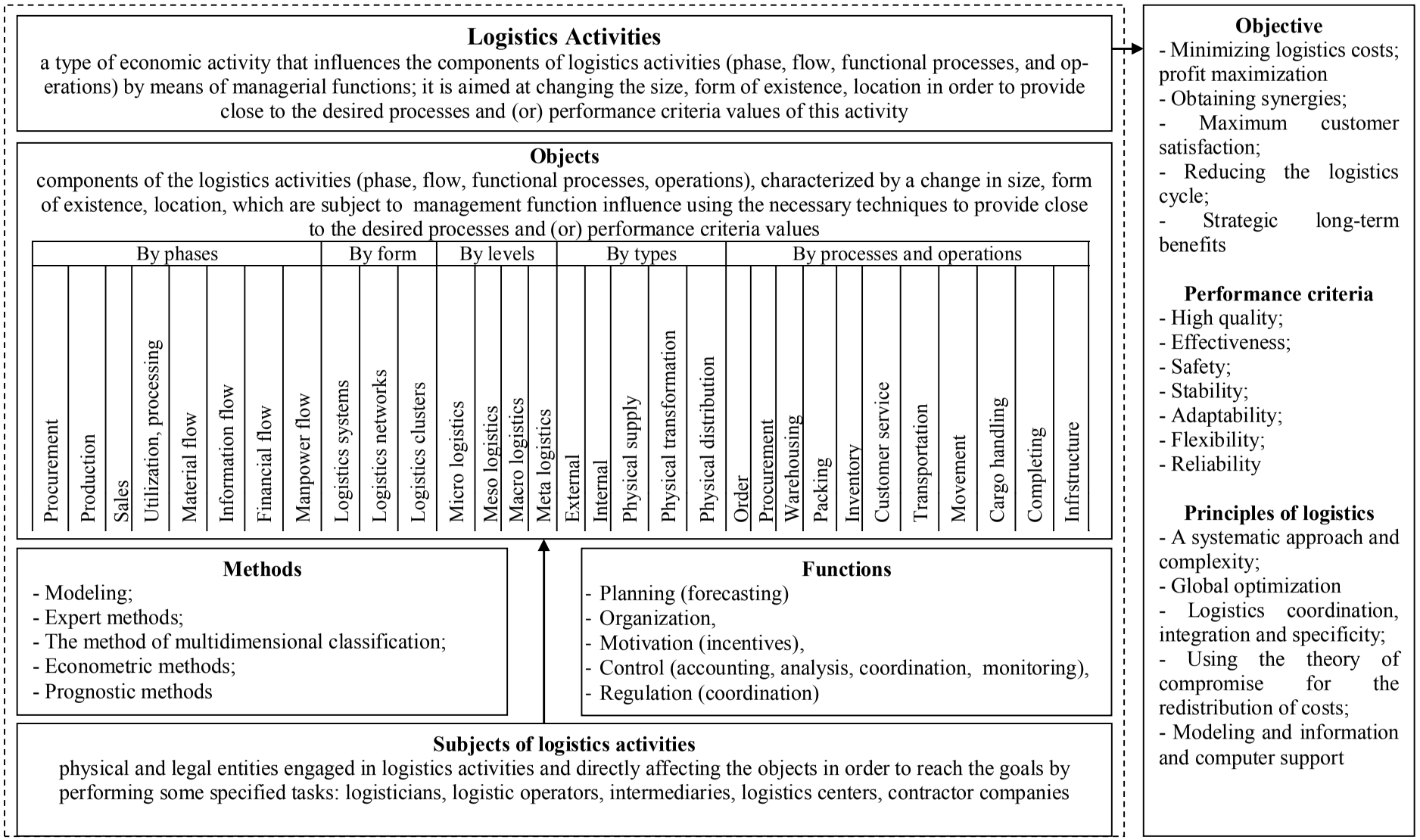

Fig. 1. System decomposition of logistics activities at the industrial enterprise

Source: developed by the author based on [1 p.153-154; 14 p.162; 15].

lowing classification groups of logistics activity components: phase scope, form of organization, levels, types, subtypes, processes, operations [1, p.154].

A careful review of the suggested approaches to the distinguishing the components of logistics activities has allowed us to identify the following groups:

1) by the phases of production and commercial cycle: procurement, production logistics activities, sales activities (distribution), processing and recycling activities [1, p.153]; management of information and financial flows [14, p.161];

2) by the form of organization: logistics systems, logistics networks, logistics clusters [15];

3) by levels: micro logistics activities, meso logistics activities, macro logistics activities [14, p.162], meta logistics activities;

4) by types: external and internal logistics activities, physical procurement, physical transformation, physical distribution [13, p.294];

5) by functions: planning (forecasting), organization, motivation (incentives), control (accounting, analysis, coordination, monitoring), regulation (coordination);

6) by processes and operations: processing and fulfilment of orders, transport activities, warehousing, packaging, stockpiling, logistics services [1, p.153]; purchasing, materials handling, monitoring the movement of products, completion [14, p.162].

Fig. 1 shows the author's vision of the system decomposition of logistics activities. This scientific method allows us to consider the system being studied (logistics activities) as a complex consisting of individual interconnected subsystems which, in turn, are divided into parts.

Based on the above study, we will consider logistics activities a type of economic activity that influences the components of logistics activities (phase, flow, functional processes, and operations) by means of managerial functions; it is aimed at changing the size, form of existence, location in order to provide close to the desired processes and (or) performance criteria values of this activity.

Conclusions. We made several conclusions based on the study:

1) First, when formulating the objective of logistics activities, the authors distinguish the following directions: cost reduction; improving the quality of customer service; reducing the impact of external risks; obtaining strategic long-term benefits. Second, the objective of logistics activities directly depends on the goal and the current situation. Third, the objects of logistics activities are the components of logistics activities (phase, flow, functional processes, and operations). Fourth, the subjects of logistics activities are physical and legal entities engaged in logistics activities and directly affecting the objects in order to reach the goals by performing some specified tasks: logisticians, logistic operators, intermediaries, logistics centers, contractor companies. Fifth, phase spheres, forms of organization, levels, types, subtypes, processes, and operations are distinguished as the components of logistics activities.

2) logistics activities are a type of economic activity that influences the components of logistics activities (phase, flow, functional processes, operations) using management functions, aiming at changing the size, form of existence, location in order to provide close to the desired processes and (or) values of the logistics performance criteria.

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Іванова М. І. Дослідження особливостей формування й наповнення терміну «логістична діяльність»: теоретичний аспект

Дослідження теоретичних аспектів формування й наповнення терміну «логістична діяльність» дозволило з'ясувати мету, завдання, об'єкти, суб'єкти та складові логістичної діяльності. У статті наведена системна декомпозиція логістичної діяльності промислового підприємства та авторське визначення терміну логістична діяльність.

Ключові слова: логістична діяльність**,** мета логістичної діяльності, завдання логістичної діяльності, об'єкт логістичної діяльності, суб'єкт логістичної діяльності, складові логістичної діяльності.

Иванова М. И. Исследование особенностей формирования и наполнения термина «логистическая деятельность»: теоретический аспект

Исследование теоретических аспектов формирования и наполнения термина «логистическая деятельность» позволило уточнить цели, задачи, объекты, субъекты и составляющие логистической деятельности. В статье приведена системная декомпозиция логистической деятельности промышленного предприятия и авторское определение термина логистическая деятельность.

Ключевые слова: логистическая деятельность, цель логистической деятельности, задачи логистической деятельности, объект логистической деятельности, субъект логистической деятельности, составляющие логистической деятельности.

Ivanova M. I. Studies of Formation and Content of the Term 'Logistics Activities': Theoretical Aspects

The investigation of theoretical aspects of formation and content of the term 'logistics activities' allowed clarifying the goals, objectives, objects, subjects and components of logistics activities. The paper has shown a system decomposition of the logistics activities at an industrial enterprise and the author's definition of the term 'logistics activities'.

Keywords: logistics activities, goal of logistics activities, objectives of logistics activities, object of logistics activities, subject of logistics activities, the components of logistics activities.

Received by the editors: 04.12.2015
and final form 28.12.2015

UDC 339.138+658.8

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MARKETING ASPECTS OF STEADY GROWTH BUSINESS STRATEGY

Setting the problem. The existing controlling and estimating techniques of business steady growth factors do not consider many marketing specifics of business activity, and represented in many ways only as lifecycle of the goods, services and innovations implemented by the managers and assumed mainly from short – term investors point of view but not long-term managers. Development of marketing strategy of the companies is one of the most important conditions of their effective development. But often managers limit development of strategy to representation them in the most general view, without their specific types. As a result strategic planning is impoverished, it is not possible to connect various strategies together and complexity in planning and management is broken, and strategy becomes impractical and little connected with real conditions of management. Strategies are main products of process of strategic management, but if the product of strategic management has indistinct, fragmentary character, instead of clear and accurate strategy, then such strategy cannot yield any results but only will worsen competitive position of the company in the market.

The company can apply various strategies to the solution of tasks of development and achievement of general goals. There is a set of different types of strategy of production development, growth, reducing, marketing, sales, investment, financial and many others. For better orientation among a set of strategies in administration managers use various classifications of strategy allowing to order them in complete system and to create common language for understanding managers of their essence.

The last research analysis. Theoretical bases of marketing as instrument of strategy formation of were decribed in works of a number of domestic and international scientists: A.F. Pavlenko, D.E. Shultz, O.C. Walker, I. Ansoff, V.V. Bozhkova, N.V. Butenko, V.A. Vasilenko, T.V. Grigorchuk, G.I. Kindratska, M.Kh. Koretskiy, T.I. Lepeyko, M. Meskon, V.D. Nemtsov, G. Pearson etc. Nevertheless, there were not fully investigated the formation problems of a strategy for organizations steady growth. There is also lack of customer-oriented approach implementation to the management as well as the usage of a system of integrated marketing communications aimed at the promotion of services.

The aim of the article is to analyze and to make recommendations about more detail study and practical application of the marketing approach development of business steady growth.

The main part. After having analyzed many definitions of steady growth, it is proper to choose the most complex one, which includes several areas. It sounds like: “Steady growth and development is defined as the growth for a considerable period, both revenues and profits, while total income for the investors (expressed as the share price and reinvestment of dividends) exceed the cost of capital. Experience shows that few companies are managed to create shareholder value, without increasing the high level of marketing management and having proper marketing strategies.

Marketing strategy focuses on long-term company objectives and involves planning, marketing programs so that they help a company realize its goals. Companies rely on marketing strategies for established product lines or services as well as for new products and services. Marketing strategy is the result of decision making by corporate executives, marketing managers, and other decision makers. In general, the formal organizational titles or jobs of decision makers, or the nature or purpose of the organization, is irrelevant to the formulation of marketing strategy. When the decisions concern products or markets, the results – i.e., the decisions – are all considered marketing strategy. In a narrow sense, marketing strategy is a specified set of ways developed by marketers to achieve desired market ends. In a broad sense, marketing strategy is composed of objectives, strategies, and tactics. Objectives are ends sought. Strategies are means to attain ends, and tactics are specific actions – i.e., implementation acts. A marketing objective of increasing market share is linked to the marketing strategy of altering the product line in order to reach new market segments and to the marketing tactic of introducing a new brand name and various promotions for a targeted portion of the market [9].

Marketing strategy is developed at different levels of an organization (the hierarchical dimension), across core marketing functions (the horizontal dimension), and for marketing execution and control functions (the implementation dimension). Strategy is usually developed in a hierarchical fashion from top to bottom; for example, there could be several layers of objectives where each objective is a function of a superstructure of superior objectives, and a determinant of subordinate objectives (except for the highest and lowest levels

of objectives). Higher-level decisions – the superstructure – act as constraints on the one hand, and guides or aids for decision making on the other. The organization levels could include the overall corporate level, strategic business units, product markets, target markets, and marketing units, depending on the complexity of the organization.

Strategy is also developed across the core functional areas of marketing: product, price, place/distribution, and promotion strategies. Any functional level of marketing, in turn, can have additional levels of marketing strategy decisions where refinement of the strategy might take place. For example, in the advertising component of the promotion function, the organization might develop marketing strategy consisting of advertising objectives, advertising strategies, advertising themes, advertising copy, and media schedules. In addition, because of the growing customer emphasis of marketing, marketers have added new customer-oriented components to the marketing mix: customer sensitivity, customer convenience, and service. Many international corporations are also connecting their general and marketing strategies with estimating and maintaining their market share.

The majority of companies that analyze their market position conclude that they are operating below their optimal market share. They are not exploiting their plant fully or have not been able to build a plant at the most economical size; they are not quite large enough to achieve promotional and/or distributional economies; and they cannot attract the strongest talent. In sum, they see a higher market share as promising greater profitability without commensurately greater risk – indeed, often as reducing that risk.

Share-building strategies must be designed to meet several considerations – whether the primary market is growing, stable, or declining, the product is homogeneous or highly differentiable, the company's resources are high or low in relation to its competitors' resources, and there are one or several competitors and how effective they are [12].

The most effective strategy for market-share gain is product innovation. Its weak sister, product imitation, may be appropriate for growth in a growing market, but it will probably not alter existing market shares. Such companies as Xerox, Zenith, Control Data, and Polaroid made their mark because they found a better product. At the same time, innovation is an expensive and risk-laden strategy requiring a careful analysis of market needs and preferences, a large investment, and astute timing.

Market segmentation may also be used to build share. Many dominant companies concentrate on the mass market and neglect or undersatisfy various fringe markets. This mistake is illustrated by the big three American auto makers, who for years sought the majority market, concluding that the small-car market segment was too small to be profitable. The vacuum they created was first filled by Volkswagen and then later by other European and Japanese auto companies at a high profit [14].

A third strategy for building market share is distribution innovation. In this instance, the company finds a way to cover a market more effectively. Timex achieved its growth as a watch manufacturer by entering unconventional outlets like drugstores and discount stores. These outlets then refused to carry additional brands of low-priced watches, leaving Timex king of the mountain. Avon achieved its spectacular growth as a leader in cosmetics by resurrecting the old and neglected channel of door-to-door selling rather than by fighting bloody battles for space in conventional retail outlets.

A final strategy for share building is promotional innovation. Consider Avis's "We're No. 2, We Try Harder." A clever and distinctive campaign or promotion, once established, is hard to duplicate or offset. At the same time, however, too many organizations emphasize promotional innovation when they should be searching for real product, segment, or distributional innovations. Flashy promotion has a hollow ring when unsupported by improvements in consumer value [8].

In evaluating their market positions, some companies will find that they are in fact operating at an optimal share level. The cost or risk of increasing their share would cancel out any gains. On the other hand, a decline in their current share would reduce their profitability. These companies are intent on maintaining market share.

Such organizations find, however, that stabilizing their share is almost as challenging as expanding it. Underdog competitors are constantly chipping away at the stable company's share. They introduce new products, sniff out new segments, try out new forms of distribution, and launch new promotions. One of the most annoying and common forms of attack is price cutting [5]. The high-share company is always wrestling with the question of whether to meet price cuts and maintain its share or give up a little share and maintain its margins. If the high-share company maintains its prices, it loses share. If it loses more than it expects, it may discover that rebuilding costs more than the gains from holding prices.

In general, the best defense for maintaining market share is a good offense – product innovation, the same strategy that works so well for the underdog. A dominant company must refuse to be content with the way things are. It has to anticipate its own obsolescence by developing new products, customer services, channels of distribution, and cost-cutting processes. A second line of defense is market fortification. The dominant company plugs market holes to prevent competitors from moving in. A third and less attractive defense for share maintenance is a confrontation strategy. Here the dominant company defends its empire by initiating expensive promotional or price-cutting wars to discipline upstart

competitors. Confrontation may work, but it is undertaken at some risk and contributes less to social welfare than would more innovative responses [7].

The marketing aspect is very important for the sustainable development of the company from the point of view that without strong aspects in the promotion policy, the company will not be able to conduct effective marketing policy, and thus its potential and competitive advantage will be reduced. The strongest impact of marketing activities on the development of strategies is shown at strengthening its stable and strong market position, which is created by achieving extremely high and stable level of loyalty in a well-defined market segment. For example: only 5% growth in terms of retention of credit by their best customers may lead to a 75% increase in terms of value creation. This jump is due to the extension of the potential value of new customers, as well as the constant increase in the growth rate due to changes in retention rates and customer loyalty. Since the successful customer retention does not dry up the source of growth, a growing company can increase the growth rate of only 5-10% due to one-time increase customer retention. Few improvements in the business have a dramatic effect on sustainable profitable growth. They are all depicted in table 1.

Table 1

Marketing management strategy destinations

<table>
<tr><th>Clients</th><th>Marketing channels</th><th>Product or the abilities</th><th>Finance</th></tr>
<tr><td>Excellent quality service and relationships with clients(loyalty)</td><td>The dominant position in the channel</td><td>Low costs of production</td><td>High devaluation, creating transaction currency</td></tr>
<tr><td>High costs of choosing another company</td><td>Partnership with leading participants of the channel</td><td>Top /unique characteristics</td><td rowspan="4">Availability of capital</td></tr>
<tr><td>Best informing about the behavior requirements</td><td rowspan="3">Controlling position in the network</td><td>Innovative products</td></tr>
<tr><td rowspan="2">Business Model built around a new segment</td><td>Patents</td></tr>
<tr><td>Major share in buyers costs</td></tr>
</table>

Most companies face some form of competition, no matter what the industry, because of deregulation and because of the globalization of many industries. Consequently, marketing strategy has become all the more important for companies to continue being profitable. The effectiveness of marketing strategies is based on internal growth strategy.

Internal growth strategy (table 2) refers to the marketing growth within the organization by using internal resources. Internal growth strategy focus on developing new products, increasing efficiency, hiring people, better marketing etc. Internal growth strategy can take place either by expansion or diversification.

By diversifying successfully into markets that are different from the one it dominates, a company can ensure that a steady stream of profits will continue even after something as drastic as an antitrust divestiture has occurred.

Many high market-share companies have done just this. For example, the Brookings Institution's classic examination of the pricing practices of 20 major corporations (including General Motors, General Electric, General Foods, and U.S. Steel) revealed that antitrust concerns seemed to motivate several high-share companies to diversify. The report states:

Many of the companies interviewed expressed a preference for making their way into new markets, wherein their share would be a minor fraction, to dominating the market in the established product."

The adoption of diversification strategies by dominant organizations normally has positive social benefits. Their movement into new industries tends to create healthy competition throughout the entire economy and help to create financially more strengthen structure of business. Diversification strategy is attractive for steady growth because allows effective ways for capital allocation.

Conclusions. In response to the continued growth of the instability of the environment a significant part of companies pays special attention to the strategic level of management. The use of marketing, importance of which in the activities of companies over the last century has steadily increased, today is not limited exclusively to the tactical aspects. Strategic marketing is used to justify the company's objectives, the choice of markets, where the company has competitive advantages to develop the benefits of these strategies. At the same time, work on strategic marketing - Analysis of internal factors, market segmentation, competitive assessment, development of marketing strategy – is preceded by the creation and promotion of the product on the market and largely determine the effectiveness of tactical marketing tools.

Table 2

Internal growth strategy destinations

Expansion		Diversification:	
Market penetration strategy:	Involves selling existing products to existing markets. To penetrate and capture the market, a firm may cut prices, improve distribution network, increase promotional activities etc.	Vertical diversification	In vertical integration new products or services are added which are complementary to the present product line or service. The purpose of vertical diversification is to improve economic and marketing ability of the firm.
Market Development strategy:	Involves extending existing products to new market. This strategy aims at reaching new customer segments or expansion into new geographic areas. Market development aims to increase sales by capturing new market area.	Horizontal diversification	Involves addition of parallel products to the existing product line. For example: A company, manufacturing refrigerator may enter into manufacturing air conditioners. The purpose of horizontal diversification is to expand market area and to cut down competition.
Product Development strategy:	Involves developing new products for existing markets or for new markets. Product development means making some modifications in the existing product to give value to the customers for their purchase.	Concentric diversification	When a firm diversifies into business, which is related with its present business it is called concentric diversification. It is an extreme form of horizontal diversification.
		Conglomerate diversification	Diversifies into business, which is not related to its existing business both in terms of marketing and technology it is called conglomerate diversification. It involves totally a new area of business. There is no relation between the new product and the existing product.

The most difficult is to define the strategy for clients with elastic demand and high quality requirements. In this area the most severe competition and customers are often offered a huge selection of virtually identical in quality and price of similar groups of goods and services from different vendors, differing only in individual functions. In these segments of the market it is difficult to clearly choose one or another strategy and follow it, as competitors will react instantly and use the weak spot. Development and choice of strategy is a complex and creative process that cannot be squeezed into the framework of pre-designed templates and a set of recommendations. This process cannot be standardized, as the creation of technical products. Only non-standard creative strategy allows achieving market leadership. With the help of different combinations of factors, market environment and institutional factors, companies create a large number of possible strategic options for development. The main task of the company management is to develop a strategy for the development of products based on innovation, create and maintain a sustainable competitive advantage to ensure the success of the company.

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Гончар В. В., Калінін О. В. Маркетингові аспекти стратегії сталого розвитку бізнесу

У статті було проаналізовано важливість маркетингу для досягнення сталого розвитку бізнесу, головні стратегії внутрішнього розвитку маркетингу та його рівні розвитку, досягнення конкурентних переваг та головні напрями маркетингового менеджменту. Надано приклади маркетингових стратегій провідних світових корпорацій. Розглянуто проблеми та перспективи стратегій екстенсивного росту бізнесу та його диверсифікації.

Ключові слова: сталий розвиток, управління, стратегія, маркетинг, маркетинговий менеджмент, маркетингові стратегії, зростання бізнесу.

Гончар В. В., Калинин А. В. Маркетинговые аспекты стратегии устойчивого развития бизнеса

В статье были проанализированы важность маркетинга для достижения устойчивого развития бизнеса, главные стратегии внутреннего развития маркетинга и его уровни развития, достижения конкурентных преимуществ и главные направления маркетингового менеджмента. Даны примеры маркетинговых стратегий ведущих мировых корпораций. Рассмотрены проблемы и перспективы стратегий экстенсивного роста бизнеса и его диверсификации.

Ключевые слова: устойчивое развитие, управление, стратегия, маркетинг, маркетинговый менеджмент, маркетинговые стратегии, рост бизнеса.

Gonchar V., Kalinin O. Marketing Aspects of Steady Growth Business Strategy

The article analyzed the importance of marketing to achieve steady business growth, the main strategy of internal development and marketing of its level of development, achieving competitive advantage and the main directions of marketing management. The examples of marketing strategies for leading corporations were described. The problems and prospects of the business strategy of extensive growth and diversification were made.

Keywords: steady growth, management, strategy, marketing, marketing management, marketing strategies, business growth.

Received by the editors: 07.12.2015
and final form 28.12.2015

Management

UDC 339.9

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THE IMPACT OF GLOBALIZATION ON CORPORATE CULTURE AND COMMUNICATION

Visible features of globalization are open boarders and lack of barriers for market entry, due to which we observe significant increase in international trade, capital flows, labour migration. The world becomes more and more interdependent, companies - transnational ones, business – international. This process is going on at a high speed in deep interaction with political, economic, social and cultural events. It is getting more and more difficult for companies to communicate in global environment. To overcome these difficulties they need to have a clear understanding how globalization influences corporate culture and communication. The answers for this question let the companies be more flexible and efficient in foreign markets as well as more competitive among rivals.

During the research some visible features and outcomes of globalization will be regarded. The focus will be mostly done on the European economic integration, progress in information and knowledge communication technologies and environmental challengers. In each case the peculiar characteristics of the process will be distinguished, its influence on corporate culture and communication will be determined and corporate reaction on these challengers will be viewed.

European Economic Integration Impact

The most visible wave of European economic integration is falling international barriers to trade, capital flow, technologies exchange, labour migration; strong cooperation nearly in all spheres and sectors of economy. Europe is in the process of one single market formation. It is related to commodities, financial derivatives, financial assets, technologies, natural resources, energy etc. Actually it might be observed the formation of one united society with the same currency, policy, custom duties, values and expectations. The more integrated the society is the more unified living standards it has. As Levitt says, "consumer goals worldwide become more and more alike" [1, p. 521]. As a result the companies have to adjust to new business environment and customers' expectations.

The impact of European economic integration on corporate culture and communications is obvious. Companies face with strong level of competition and their employees have to be more innovative, creative and communicative. Herrmann observes another tendency: "most humans seem to have a basic need to belongingness and therefore feel happier in the culture they know" [2], it is not an easy task for them to adjust to a new culture. Operating in new markets they might feel uncomfortable and thus less effective. One more feature of European integration is transparency in all procedures, thus the process of communication in and out of the company has to be transparent enough to let it be well integrated in European business environment.

To respond the challengers of European economic integration the companies should change their policies. As Levitt says, "companies must learn to operate as if the world were one large market – ignoring superficial regional and national differences" [1, p. 521]. Thus most companies become transnational ones. According to Levitt multinationals tend to offer "globally standardized products that are advanced, functional, reliable, and low priced to enjoy economies of scale in production, distribution, marketing, and management" [1, p. 521]. To launch these products they have to employ personal able to work at the large European market maintaining high European standards of services. Brickley, Smith and Zimmerman emphasize that "employees are expected to be focused on quality and customer service" [3, p. 273]. To meet customer expectations most companies introduce new compensation schemes enhancing their workers motivation to behave with clients in a proper manner even without formal policies to follow. Training sessions appear to be a good tool to develop these skills.

Progress in Information and Knowledge Communication Technologies Impact

Over the last century a lot of modern technologies appeared to relieve everyday life, increase human well-being and create the basis for sustainable economic development. Milgrom and Roberts [4] determine recent features of technological changes stressing that technologies become more flexible, the same information and communication technologies can be used effectively in a variety of different companies and different economic sectors, the process of technologies exchange becomes faster and faster, high speed of technological changes require the companies to keep in step with progress and

new innovations. More attention is paid to individual qualities and value of knowledge. Highly ranked experts with professional knowledge of foreign languages and cross cultural differences are in a high demand as they are able to work in subsidiaries and extend companies business abroad.

Recent information and knowledge communication technologies evolution make a great influence on employees' behavior, career paths, way the employees communicating with each other and corporate culture as well. Milgrom and Roberts state that many workers are expected to be skilled enough to be able to move from task to task, engineers are required to be aware of the capabilities and needs of different parts of the company and thus are rotated frequently among jobs [4, p. 588]. The same changes affect top managers who are responsible for strategic decision making and thus have to be far ahead of their rivals in actions and strategy. A week point is highly skilled international labour migration. Herrmann mentions in her research that it gets a tendency to transfer experts from country to country to help build new subsidiaries [2]. But there might be a danger as the experts get more professional in foreign market they might leave the company for a better job and nobody can predict their career path decision. As we have seen companies become more and more dependant from knowledge and skills of their employees.

To prevent the loss of high qualified workers companies have to be accurate in personal management. As Milgrom and Roberts note companies should recognize the importance of knowledge and skills of their employees and entrust them with more responsibility and discretion [4, p. 588]. Motivation for active participation in manufacturing process and design of new products seems to be the best solution for keeping workers with a company for long term. In this case different types of profit shearing schemes have to be introduced to the personal. What about skills and knowledge of the personal it is a main concern of the company to train and reward workers to be multiskilled. In this context fruitful cooperation between companies and universities creates new opportunities for implementation of long life learning concept in practice. Effective, ongoing communication with customers to learn their needs and expectations is essential as well. To carry out all these tasks companies have to develop an effective policy of information and knowledge communication.

Environmental Challenges Impact

During the last century the world community made a significant step forward in economic transformations and social reforms. Such rapid development puts great burden on environment and leads to irreversible climate changes. Humanity has already faced with such problems as freshwater limits, ecosystem destruction, biodiversity loss chemical pollution, greenhouse effect etc. The most threatening environmental challenges for goods manufactures appear the quality, quantity and availability of natural resources. These issues endanger further economic development and become a burning issue for stakeholders in the world.

Environmental challengers impact on companies today activity is not less than some other factors, sometimes it is even more visible and tangible. For example, the quality of natural resources might not be sufficient for production of high qualified goods in a full range. In this case the company has to search for substitutes or new supplies. Companies' activity is limited by availability and quantity of nonrenewable resources, every day they have to compete for resources at the international level trying gain in a new market. Such serious problems as global warming, depletion of ozone layer can not be ignored by ordinary companies as well. They have to be equal partners in international alliances assembled to cope with new challenges. In all these cases effective communication in both internal and external environment is needed.

As we see the development of corporation has to be in a closed interaction with local ecosystem. Although the balance between economy, society and environment is essential this state is impossible to reach unless the way of thinking in society is not changed. It is important to change economic agents' attitude to the environment. Ecological responsibility has to be deeply integrated into modern corporate culture. Companies should switch on new innovative development models which assume improvement of manufacturing technologies, energy saving policy and rational attitude to natural resources consumption. In this context knowledge become the most influential factor of economic changers. As Fritsch, Schmidheiny and Seifritz argue in their book on ecologically sustainable growth society [5], knowledge accumulation allows accelerate technological changers and speed production process improving. But quite important question arises how to initiate knowledge communication among experts and decision makers. Complete answer is given by Eppler in the Paper: 'The Concept of Knowledge Communication and its Relevance to Management' [6]. The results of these two publications might be a good background for an effective policy of information and knowledge communication elaboration.

Conclusion

From examining Milgrom's, Roberts', Eppler', Levitt's, Brickley's, Smith's, Zimmerman's, Fritsch's, Schmidheiny's, Seifritz's works it gets possible to state the following. European economic integration, progress in information and knowledge communication technologies and environmental challengers are the most influential globalization factors. To overcome their impact the companies have to develop an efficient policy of information and knowledge communication. The basic components of this policy should be new compensation schemes enhancing workers motivation to behave with clients in a proper manner, training sessions to develop

appropriate communicative skills, fruitful cooperation between companies and universities to train and reward workers to be multiskilled, ecological responsibility cultivation in the frame of corporate culture, new innovative development models assuming improvement of manufacturing technologies, energy saving policy and rational attitude to natural resources consumption. Due to this policy implementation companies might be finally well integrated into European business environment and exercise successfully advantages of international cooperation.

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Хоменко Я. В., Хоменко І. А., Бородіна Є. С. Вплив глобалізації на корпоративну культуру та комунікації

В статті розглянуто основні особливості та наслідки глобалізації. Акценти зроблено на процесі європейської інтеграції, прогресі інформаційних технологій та технологій з обміну знаннями, а також на нових викликах з боку оточуючого середовища. У кожному окремому випадку визначено особливості цих явищ, характер їх впливу на корпоративну культуру і комунікації та можлива реакція на ці явища з боку корпорацій.

Ключові слова: глобалізація, економічна інтеграція, корпоративна культура, комунікації, оточуюче середовище, інформаційні технології, технології з обміну знаннями.

Хоменко Я. В., Хоменко И. А., Бородина Е. С. Влияние глобализации на корпоративную культуру и коммуникации

В статье рассмотрены основные черты и последствия глобализации. Акценты сделаны на процессе европейской экономической интеграции, прогрессе информационных технологий и технологий обмена знаниями, а также на новых вызовах со стороны окружающей среды. В каждом отдельном случае определены особенности этих явлений, характер их влияния на корпоративную культуру и коммуникации и возможная реакция на происходящие события со стороны корпораций.

Ключевые слова: глобализация, экономическая интеграция, корпоративная культура, коммуникации, окружающая среда, информационные технологии, технологии обмена знаниями.

Khomenko Y. V., Khomenko I. A., Borodina E. S. The Impact of Globalization on Corporate Culture and Communication

In this paper some visible features and outcomes of globalization are regarded. The focus is mostly done on the European economic integration, progress in information and knowledge communication technologies and environmental challengers. In each case the peculiar characteristics of the process are distinguished, its influence on corporate culture and communication is determined and corporate reaction on these challengers is viewed.

Keywords: globalization, economic integration, corporate culture, communication, environment, information technologies, knowledge communication technologies.

Received by the editors: 23.11.2015
and final form 28.12.2015

UDC 330.341.1+334.72

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DEVELOPMENT OF INNOVATIVE BUSINESS ON PRINCIPLES PUBLIC-PRIVATE PARTNERSHIPS

The research was conducted within the research project of IIE of NAS of Ukraine «Development of public-private partnerships in the modernization of the coal industry and thermal power» (state registration number 0115U001638).

Problem setting. In modern conditions of innovative enterprise in the Ukrainian economy hinder the low proportion of entities that carry out an innovative business that is primarily due to the absence of the main factors that affect the development of innovative entrepreneurship in the country: a little consumer demand for innovative products; insufficient financing of scientific and technical capacity of the national economy; the lack of functioning of venture capital firms and investors who finance risky innovative activities.

In the field of small and medium-sized businesses present interest in accelerating the development and use of new technologies, the production of new products, bringing to the stage of industrial design innovations that are transferred on a commercial basis for the use of large enterprises.

The presence of entrepreneurial initiative, sufficient development of small and medium-sized businesses, and the use of effective mechanisms of state incentives can be the basic principles of the implementation of innovative processes. And intensive innovative development of Ukraine is possible by carrying out deep economic reforms aimed at the establishment of competitive small and medium-sized businesses, measures to translate innovative projects through the stimulation of innovative enterprises.

World experience shows that one of the ways to enhance the development of innovative business is a partnership of public and private sectors as a form of public-private partnerships. The use of such a mechanism would allow the expense of mutually beneficial cooperation of the state and private partners to accelerate the technological upgrading of the coal industry and thus improve the quantity and quality of coal products and to accelerate industrial growth at the regional and national level.

Analysis of recent researches and publications. Economic analysis of scientific sources indicates that scholars paid much attention to the problems of development of innovative business in Ukraine. Identify financial, tax, organizational and economic mechanisms of development of innovative business. The proposals on information and organizational support of functioning of small innovative enterprises [1–11].

Despite the wide range of scientific research on the subject, the study of essence of innovative entrepreneurship, implementation of the SWOT-analysis of his status in Ukraine, identification of the main factors hindering intensification of the functioning of small and medium enterprises in innovation, the development of a set of measures to address the identified problems of insufficient development of innovative business does not lose its relevance and determines the choice of the research topic.

The task of this study is to develop proposals for the development of innovative business on the principles of public-private partnerships.

The main material of the study. Under the innovative entrepreneurship refers to a business that applies for profit qualitatively new approaches, materials, ideas and products to meet consumer demand. Innovative business comprises the steps of: searching for innovative ideas, evaluate ideas, business plan development of the innovative project, the search for the necessary resources, management created innovations. To the subjects of innovative business enterprises and organizations are engaged in innovative activities.

Innovation active enterprises in the field of small and medium businesses need to evolve in today's economic conditions, since these structures are characterized by such features:

– The high level of flexibility in competitive new products, where the main factor is the rate of renewal of the products;

– Focus on the search for fundamentally new products and processes associated with high commercial and technical risk – they account for the bulk of the costs of exploration, development and development of scientific and technological innovations;

– Responsiveness to the changing needs of consumers; creating an atmosphere of intense work;

– Organizational separation from significant current production.

To identify strengths and weaknesses, opportunities and threats to the development of innovative business in Ukraine carried out SWOT-analysis, the results of which include:

– *Strengths:* a high level of scientific potential of the state and the training of scientific personnel with innovative potential; developed system of higher education; by elements of innovation management; the formation of innovative infrastructure facilities to meet current economic conditions; having a successful innovation and cooperation between science and business environment; the use of tools of organizational, technical and financial support for the development of public-private partnerships in innovation;

– *Weaknesses:* insufficient investment of innovation development of the State; limited possibilities of external financing (lack of venture capital funds); no methodology for calculating the indicators of innovation; low level of innovation culture of entrepreneurs;

– *Opportunities:* the development of innovative businesses; a high level of research and innovation capacity; innovative business development through access to the various applications of funding; develop a modern regulatory framework of innovation; the development of innovative entrepreneurship in Ukraine by EU funding;

– *Threats:* financial and administrative factors that hinder the development of innovative businesses; insufficient resources for lending most innovative companies; sophisticated selection of qualified specialists for innovative businesses; scientists are not interested in starting their own business.

The analysis of the dynamics of the main indicators of innovation activity in Ukraine leads to the following conclusions:

The share of enterprises engaged in innovation, declined during 2000–2014 by 1.9%. The share of enterprises introducing innovations during this period decreased by 2.7%. During 2000–2014 biennium the proportion of sales of innovative products in the volume of industry decreased by 6.9% [12].

According to the State Statistics Service of Ukraine share of the costs of internal and external research projects in the total cost of innovation has increased over 2000–2014 7.7%, for the purchase of machinery, equipment and software – 5.4%. The share of the costs of acquisition of other external knowledge in the total cost of innovation decreased by 3.5%.

During 2000–2014 biennium the growth rate of total spending on innovation amounted to 11.1%, own funds of enterprises – 11.6% of the state budget – 31.2% of foreign investments – 0.3%, of funds from other sources of funding – 8.4 %.

The share of enterprises' own funds in the total amount of financing of innovative activity has increased over 2000–2014 by 5.3% of the state budget – by 4%. The share of foreign investors in the total volume of funding decreased by 5.8% from other sources – by 3.6% [12].

According to the State Statistics Service of Ukraine the amount of the introduction of new manufacturing processes has increased over 2000–2014 24.2%, or 1403 to 1743. The share of low-waste and resource-saving processes in the total implementation of innovative processes decreased by 5% and amounted in 2014 25.7%. Number of the introduction of innovative products decreased by 76.1%, or 15323 to 3661. The share of new types of equipment in the total amount introduced innovative products increased by 31.8%. During 2000–2014 biennium the number of new types of machinery increased by 2.1 times.

The share of industrial enterprises, which introduce innovative products, accounted for in 2012–2014 10.5% of innovative processes – 11.3%, organizational innovations – 2.3% marketing innovations – 2.9% [13, p. 155].

According to the State Statistics Service of Ukraine innovative processes in 2014 we have implemented 614 enterprises, of which 459 – new or improved methods of processing and production (processes), the number of which was 1743, including low-waste and resource – 447; 123 companies – new or improved methods of logistics, delivery or distribution of products, 190 – new or improved activities to support the processes of logistics services and procurement transactions.

Organizational innovation carried out 125 enterprises, marketing – 157. In 2014 905 companies have implemented innovative products to 25.7 billion UAH, or 2.5% of the total volume of industrial products [14, p. 161].

Innovation in 2014 involved 1595 enterprises (15.9% of the surveyed industries), including: innovative products introduced in 1054 enterprises, of which 257 –a new market and 923 – new only to the enterprise; innovation processes – 1127 companies, of which 926 – new or improved methods of processing and production, 233 – new or improved methods of logistics, delivery or distribution of products and 349 – new or improved activities to support processes, in particular, the system of financial service operations procurement, accounting and estimates. In order to meet the needs of consumers as well as increasing sales of 289 companies have introduced marketing innovations. 232 enterprises increased their efficiency through the introduction of organizational innovations [14, p. 162].

Based on the results of the study revealed the factors that hinder the efficient functioning of small and medium-sized businesses in innovation:

– Insufficient infrastructure to support innovative entrepreneurship;

– Insufficient budgetary funds for scientific and technical sphere;

– The lack of venture capital and the underestimation of the stock and mechanisms;

– Insufficiently stable financial condition of enterprises;

– A weak stimulation of the development of innovative financing of non-state (lack of venture financing);

– Administrative barriers (according to foreign experts, to 8% of revenue spent by entrepreneurs on overcoming administrative barriers);

– Lack of an integrated legal support of innovative entrepreneurship;

– Lack of motivation on the part of entrepreneurs for using the results of scientific research budget in innovation;

– Lack of effective development of innovative entrepreneurial environment;

– Insufficient level of innovation culture;

– Limited access to information innovation environment;

– Lack of support for small innovative businesses at regional level.

With a view to enhancing the development of innovative business in Ukraine, it is expedient to develop a set of proposals:

1. The task of overcoming barriers related to insufficient infrastructure to support innovative entrepreneurship:

The formation of innovative infrastructure objects, which should work as a single mechanism;

Establishment of a regional network of business incubators in all fields of knowledge, including higher education;

Creating a network of strategic centers for innovative development in Ukraine, with the main objective of the development and implementation of innovative projects. Center of strategic development sectors should be focused on the development of the sector or industry clusters;

The formation of innovative clubs for entrepreneurs whose main task is to create conditions for innovative entrepreneurship in innovation;

Databases formation of innovative ideas which should be available to entrepreneurs and other interested categories;

Providing advice on intellectual property protection of innovative entrepreneurs.

2. The objectives to overcome barriers associated with low specific weight high-tech exports in innovation:

Monitoring technologies and forecasting macro and micro levels;

Assessment of technological production in Ukraine.

3. The challenge of overcoming barriers related to low demand for innovation on the part of government and departmental structures:

Training of administrative staff through seminars, trainings, meetings;

Overcoming psychological barriers.

4. In order to overcome barriers related to insufficient budget expenditures on scientific and technical sphere:

Growth of innovative development financing from the state budget and investment resources.

5. The challenge to overcome barriers related to the lack of venture capital and the underestimation of the stock and mechanisms:

Development and implementation of legislation on venture capital funds and innovation funds to support the development of innovative entrepreneurship;

Creation of a national venture capital fund for targeted support to promising projects of innovative character.

6. Challenges to overcome barriers related to the precarious financial state of the enterprises that produce innovative products:

Restructuring of internal management of enterprises to their adaptation to market changes, the establishment of effective relationships with customers innovative products and services;

Training of management staff of enterprises to attract highly qualified professionals to the management.

7. The challenge to overcome the barriers associated with insufficient infrastructure to support service organizations:

The formation of service structures as part of major innovation units.

8. The challenge to overcome barriers related to the lack of training for the innovation economy and a qualified management innovation:

Attracting professionals at all stages of the implementation of innovative projects;

The creation of a unified system of training and professional development for professionals in the field of technological innovation, including distance learning;

Development of a national site «innovative entrepreneurship» to establish new contacts between entrepreneurs, experts and solutions to their common problems in the field of innovation;

Attracting foreign investors at the expense of benefits provided for the production of innovative products.

9. The task to overcome the barriers associated with a weak stimulation of innovation of non-governmental funding of innovation, lack of venture capital investment:

The introduction of tax benefits for taxpayers, which are aimed at improvement of the existing equipment and technologies or the creation of innovative products;

Expand the use of tax holidays;

Expansion of the list of high-tech imported equipment, which is imported free of import duties;

Funding for state guarantees and interest rate subsidies on loans for export contracts;

The creation of venture capital funds and the national innovation fund for entrepreneurship.

10. To overcome administrative barriers:

Development of national strategic innovation development program up to 2030;

The widespread use of technology «single window»;

The use of administrative responsibility for the delay in decision-making on innovation.

11. The challenge to overcome barriers related to the lack of a comprehensive legislative support innovative entrepreneurship:

Develop a set of laws necessary to ensure the actual functioning of innovative entrepreneurship.

12. In order to overcome barriers related to the lack of motivation on the part of entrepreneurs to use the results of budget research on the problems of innovative entrepreneurship:

Introduction of incentives for companies producing innovative products;

Compensation to owners since the first three years of operation of the business incubator (60, 40 and 20%);

Introduction of accounting in the field of marketing.

13. Challenges to overcome barriers related to insufficient effective development of innovative business environment:

Providing free consulting services;

Innovative entrepreneurs to provide a continuous exchange of information through the media, internet resources.

14. In order to overcome the barriers associated with low and limited access to information innovation environment (business available market information, resources, public procurement, regulations, etc.):

Formation and development of a national system of information and consulting support to innovative entrepreneurship and its integration into a single information system consulting.

15. Challenges to overcome barriers related to insufficient innovation culture in the field of innovative entrepreneurship:

The formation of a positive image of the entrepreneur on the basis of an innovative promotion of innovative ideas among the population and increase the social responsibility of business through a mechanism of social accountability and moral incentives.

16. The challenge to overcome barriers related to the lack of support for small innovative businesses at regional and local level:

Providing financial, informational, educational support at the expense of local budgets through the establishment of special funds to support innovative entrepreneurship.

In order to overcome the above barriers to innovative entrepreneurship in Ukraine is necessary to conduct a series of incremental steps:

– Identifying innovative companies in the country, the determination of their share in the total volume of innovative products produced by these enterprises;

– Analysis of the needs, problems, the main reasons hampering the innovative development of innovative companies;

– Development of models and mechanisms that promote cooperation between business structures and scientific organizations;

– The formation of clusters of promising companies operating in key technology sectors with high potential for development.

The results of this research suggest the need to address the major challenges for the development of innovative business in Ukraine in the contemporary economy. Among them:

– Creating an enabling institutional, structural, legal and other condition for the development of innovative entrepreneurship in the industrial sector and the service sector, including through the extensive use of technology «single window»;

– Formation of an effective competitive sector of innovative business based on strategic relations with big business, synergy with governments at the regional and local levels;

– The accelerated growth and sustainability of innovative entrepreneurship by improving the development and support of small and medium-sized enterprises, strengthening the role of innovative entrepreneurship in the gross regional product in terms of intensification of regional development in Ukraine, improving the quality of life in cities and regions.

Conclusions. Innovative entrepreneurship is a dynamic form of public-private partnership, where the processes are carried out intensive restructuring, change of activity, the creation of new and liquidation in the prescribed manner of inefficient enterprises.

To improve the situation in the innovative business in the short term expedient implementation of a number of the following activities:

– Analysis of the actual state of development of innovative business;

– Increase in the number of small enterprises in innovation, as close to the standards of building an innovative economy (60–80%);

– Creating the conditions for small businesses to reduce costs by introducing new products to improve competitiveness;

– Ensure access of small innovative businesses to various sources of funding in order to reduce the costs of the introduction of innovative products;

– Implementation of the selection of projects that require subsidies;

– Formation of a system of training for the innovation sphere, which in the future should be gradually integrated into the international system;

– The creation of the state of scientific and methodological center of a multi-level system of training specialists in the field of innovation;

– Formation of innovative infrastructure objects, for example, a consortium whose main task should be to find and implementation of large innovative projects related, usually with the use of new technologies. Consortium in innovation can be a certain time agreement between banking institutions, innovative enterprises, companies, research centers for high-tech and capital-intensive projects.

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Драчук Ю. З., Трушкіна Н. В. Розвиток інноваційного бізнесу на принципах публічно-приватного партнерства

У статті виконано SWOT-аналіз інноваційного бізнесу в Україні. Проаналізовано основні показники інноваційної діяльності в Україні. Досліджено чинники, які стримують активацію функціонування малих і середніх підприємств в інноваційній сфері, серед яких: недостатній розвиток інфраструктури підтримки інноваційного підприємництва; недостатній обсяг бюджетних коштів на науково-технічну сферу; відсутність венчурного капіталу і недооцінка венчурного і фондового механізмів; недостатньо стійкий фінансовий стан підприємств; слабке стимулювання розвитку інноваційної системи недержавного фінансування (відсутність венчурного фінансування); адміністративні бар'єри (за даними зарубіжних експертів, до 8% виручки підприємців витрачається на подолання адміністративних бар'єрів); відсутність комплексного законодавчого забезпечення інноваційного підприємництва; відсутність мотивації з боку підприємців за використанням результатів бюджетних наукових досліджень в інноваційній сфері; недостатньо ефективний розвиток інноваційного підприємницького середовища; недостатній рівень інноваційної культури; обмежений доступ до інформаційного інноваційного середовища; відсутність системи підтримки малого інноваційного підприємництва на регіональному рівні.

Результати проведеного наукового дослідження свідчать про необхідність вирішення основних завдань для розвитку інноваційного підприємництва в Україні в сучасних умовах господарювання. Серед них: формування сприятливих інституційних, структурних, законодавчих та інших умов для розвитку інноваційного підприємництва у виробничій сфері та сфері послуг, у тому числі шляхом широкого використання технології «єдиного вікна»; формування ефективного конкурентоспроможного сектора інноваційного підприємництва на основі стратегічних взаємовідносин з великим бізнесом, узгодженості дій з органами управління на регіональному та місцевому рівнях; забезпечення прискореного економічного зростання і стійкості інноваційного підприємництва шляхом поліпшення розвитку та підтримки малих і середніх підприємств, посилення ролі інноваційного підприємництва в структурі валового регіонального продукту в умовах інтенсифікації регіонального розвитку України, підвищення якості життя населення в містах і регіонах.

Розроблено пропозиції щодо розвитку інноваційного підприємництва на принципах публічно-приватного партнерства. Для поліпшення ситуації в інноваційному підприємництві в найближчій перспективі доцільне здійснення ряду таких заходів: аналіз реального стану розвитку інноваційного підприємництва; зростання кількості малих підприємств в інноваційній сфері з максимальним наближенням до

стандартів побудови інноваційної економіки; створення умов для скорочення витрат малих підприємств на впровадження нової продукції для підвищення конкурентоспроможності; забезпечення доступу малих інноваційних підприємств до різних джерел фінансування для зниження витрат на впровадження інноваційної продукції; здійснення відбору проектів, які потребують субсидій; формування системи підготовки фахівців для інноваційної сфери, яка в подальшому має бути поступово інтегрована в міжнародну систему; створення державного науково-методичного центру розвитку багаторівневої системи підготовки фахівців у сфері інновацій; формування об'єктів інноваційної інфраструктури, наприклад, консорціуму, основним завданням якого має бути пошук і реалізація великих інноваційних проектів, пов'язаних, як правило, з використанням нових технологій.

Ключові слова: інноваційне підприємництво, малі підприємства, активізація, розвиток, дієва форма, публічно-приватне партнерство, методи аналізу, показники, чинники, джерела фінансування, пропозиції.

Драчук Ю. З., Трушкина Н. В. Развитие инновационного бизнеса на принципах публично-частного партнерства

В статье выполнен SWOT-анализ инновационного бизнеса в Украине. Проанализированы основные показатели инновационной деятельности в Украине. Исследованы факторы, сдерживающие активацию функционирования малых и средних предприятий в инновационной сфере, среди которых: недостаточное развитие инфраструктуры поддержки инновационного предпринимательства; недостаточный объем бюджетных средств на научно-техническую сферу; отсутствие венчурного капитала и недооценка венчурного и фондового механизмов; недостаточно стабильное финансовое состояние предприятий; слабое стимулирование развития инновационной системы негосударственного финансирования (отсутствие венчурного финансирования); административные барьеры (по данным зарубежных экспертов, до 8% выручки предпринимателей расходуется на преодоление административных барьеров); отсутствие комплексного законодательного обеспечения инновационного предпринимательства; отсутствие мотивации со стороны предпринимателей за использованием результатов бюджетных научных исследований в инновационной сфере; недостаточно эффективное развитие инновационной предпринимательской среды; недостаточный уровень инновационной культуры; ограниченный доступ к информационной инновационной среде; отсутствие системы поддержки малого инновационного предпринимательства на региональном уровне.

Результаты проведенного научного исследования свидетельствуют о необходимости решения основных задач для развития инновационного предпринимательства в Украине в современных условиях хозяйствования. Среди них: формирование благоприятных институциональных, структурных, законодательных и других условий для развития инновационного предпринимательства в производственной сфере и сфере услуг, в том числе путем широкого использования технологии «единого окна»; формирование эффективного конкурентоспособного сектора инновационного предпринимательства на основе стратегических взаимоотношений с крупным бизнесом, согласованности действий с органами управления на региональном и местном уровнях; обеспечение ускоренного экономического роста и устойчивости инновационного предпринимательства путем улучшения развития и поддержки малых и средних предприятий, усиления роли инновационного предпринимательства в структуре валового регионального продукта в условиях интенсификации регионального развития Украины, повышения качества жизни населения в городах и регионах.

Разработаны предложения по развитию инновационного предпринимательства на принципах публично-частного партнерства. Для улучшения ситуации в инновационном предпринимательстве в ближайшей перспективе целесообразно осуществление ряда следующих мероприятий: анализ реального состояния развития инновационного предпринимательства; рост количества малых предприятий в инновационной сфере с максимальным приближением к стандартам построения инновационной экономики; создание условий для сокращения расходов малых предприятий по внедрению новой продукции для повышения конкурентоспособности; обеспечение доступа малых инновационных предприятий к различным источникам финансирования для снижения расходов по внедрению инновационной продукции; осуществление отбора проектов, требующих субсидий; формирование системы подготовки специалистов для инновационной сферы, которая в дальнейшем должна быть постепенно интегрирована в международную систему; создание государственного научно-методического центра развития многоуровневой системы подготовки специалистов в сфере инноваций; формирование объектов инновационной инфраструктуры, например, консорциума, основной задачей которого должен быть поиск и реализация крупных инновационных проектов, связанных, как правило, с использованием новых технологий.

Ключевые слова: инновационное предпринимательство, малые предприятия, активизация, развитие, действенная форма, публично-частное партнерство, методы анализа, показатели, факторы, источники финансирования, предложения.

Drachuk Yu. Z., Trushkina N. V. Development of Innovative Business on Principles Public-Private Partnerships

In the paper performs the SWOT-analysis of innovative business in Ukraine. The major indicators of innovative activity in Ukraine are analyzed. The factors, that inhibit the activation of the functioning of small and medium enterprises in innovation, are investigated, among which: insufficient infrastructure to support innovative entrepreneurship; insufficient budgetary funds for scientific and technical sphere; the lack of venture capital and the underestimation of the stock and mechanisms; insufficiently stable financial condition of enterprises; a weak stimulation of the development of innovative financing of non-state (lack of venture financing); administrative barriers (according to foreign experts, to 8% of revenue spent by entrepreneurs on overcoming administrative barriers); lack of an integrated legal support of innovative entrepreneurship; lack of motivation on the part of entrepreneurs for using the results of scientific research budget in innovation; lack of effective development of innovative entrepreneurial environment; insufficient level of innovation culture; limited access to information innovation environment; lack of support for small innovative businesses at regional level.

The results of this research suggest the need to address the major challenges for the development of innovative business in Ukraine in the contemporary economy. Among them: creating an enabling institutional, structural, legal and other condition for the development of innovative entrepreneurship in the industrial sector and the service sector, including through the extensive use of technology «single window»; formation of an effective competitive sector of innovative business based on strategic relations with big business, synergy with governments at the regional and local levels; the accelerated growth and sustainability of innovative entrepreneurship by improving the development and support of small and medium-sized enterprises, strengthening the role of innovative entrepreneurship in the gross regional product in terms of intensification of regional development in Ukraine, improving the quality of life in cities and regions.

The proposals to enhance the development of innovative entrepreneurship as the effective form of public-private partnership in Ukraine are developed. To improve the situation in the innovative business in the short term expedient implementation of a number of the following activities: analysis of the actual state of development of innovative business; increase in the number of small enterprises in innovation, as close to the standards of building an innovative economy (60–80%); creating the conditions for small businesses to reduce costs by introducing new products to improve competitiveness; ensure access of small innovative businesses to various sources of funding in order to reduce the costs of the introduction of innovative products; implementation of the selection of projects that require subsidies; formation of a system of training for the innovation sphere, which in the future should be gradually integrated into the international system; the creation of the state of scientific and methodological center of a multi-level system of training specialists in the field of innovation; formation of innovative infrastructure objects, for example, a consortium whose main task should be to find and implementation of large innovative projects related, usually with the use of new technologies.

Keywords: innovative entrepreneurship, small businesses, revitalization, development, effective form, public-private partnership, methods of analysis, indicators, factors, sources of funding, proposals.

Received by the editors: 27.11.2015
and final form 28.12.2015

UDC 338.2:658:140.8

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PARADIGMATIC BASICS OF STRATEGIC MANAGEMENT

In recent decades, the demand for strategic management dramatically enhanced. Separate individuals, households, companies, municipalities, regions, multinational companies, government and supranational structures create your own strategies. For instance, the international standard ISO 9001 indicated the need for setting goals of the organization from top management (5.4.1 of ISO 9001: 2008). According to this standard at the beginning of 2015 more than 1.1 million companies has been certified [1]. In fact, strategic management, or at least some of its elements have become a universal attribute of management, which leads to the relevance of the study of this problem, especially in the transition to a post-industrial society and the postmodern logic.

Science-based approaches to strategic management were laid down in the second half of the twentieth century [2, 239]. This theme is actively studied by famous scientists, among them R. Ackoff, I. Ansoff, H. Mintzberg, Porter, P. Krugman. As result, over the past half century, number of schools that have specific differences and characteristics were formed [3].

However, there remain a number of unanswered questions. Why strategic management, as a science-based discipline and a common practice, haven't arisen in the past? For instance, in ancient times or times of the Enlightenment when the logic of positivism became common rule in all life areas. How belief in God or the perception of space and time influenced the formation of strategic management? Thus, there is available, the unresolved problem of the influence on the formation of world outlook paradigm of strategic management and its further development in the framework of the postmodern and the transition to a postindustrial society logic.

The purpose of the article is to show the influence of modernist paradigm on the formation of strategic management and the possibility of changing it according to the logic of postmodernism. The strategy in this paper is defined according to the logic of modernity, as "described way of converting existing reality in long term target reality" [4, p.39].

The modern structure of the strategy is almost canonized, and includes the following elements: mission, vision, values, strategic goals and plans of the implementation goals, implementation risks. Standardization experts say: "despite the fact that none of these standards are say on the mandatory formation of the mission, the vision (of the future) and the strategic plan of the organization, the majority of companies ... are developing these documents" [5, p.198]. Thus, it can be argued that the development of the mission, vision and strategic plan is not a special case for some large companies, and it is massive activity.

The mission is the ontological element of strategy. It gives answer for the question, “What for (why) is the organization exist?"

The vision and goals reflect the space-time side. It gives answer for the question, “Where is organization plan to be in the future?" The risks of the strategy depend on goals and reflect measure of deviation from them.

Values characterize the ethical component of the strategy. It gives answer for the question, “What are the moral and ethical conditions correspond to the organization's mission and goals?”

The subject of strategy is organization which implementing the strategy. Strategist is a subject of strategy formation.

The object of strategy is internal and external environments of organization.

Epistemological component manifested at the stage of the strategy, and characterizes interaction strategist with environment.

Therefore, any strategy can be presented in the ontological-epistemological and spatiotemporal context according to premodern, modern and postmodern paradigms. It’s allowed evaluate the strategy formation through the interpretation of categories such as subject, object, space, time and their relationship. It should be noted that these paradigms cannot fully considered independently from each other. The premodern and postmodern are comprehended according to logic of modernity. But each of paradigms can be associated with a certain type of society, geographical and time bounds (Table 1) [6, p.26].

As shown in table 1, the formation of strategic management be located on border of transformation human civilization. And 9 from 13 classification types point to this. Each type of society has own philosophical paradigm.

A common set of markers that characterize the paradigm in the context of strategic management elements and the factors influencing them, is given in table 2.

Within the logic of premodern era (Indian religions) object is identical to the subject and his cognition through analysis is not provided. For instance identity of the object and the subject can be shown as the possibility of transformation of man into a tree or a deity. It does not involve any physical activities and physical effort on the part of the subject, but only his contemplation. As a result, creation a strategy in the ontological-epistemological context doesn't have sense.

Table 1

Social stages in the history of human civilization *

Chronology							
B.C.				A.D.			
2.5 M 8000 3500 500 0 500 1500 1750 1914 ▼1970 2000 +							
Traditional Society					Modern Society		Postmodern Society
Pro-Industrial Society					Industrial Society		Postindustrial Society
Primitive Society		Agricultural Society			Industrial Society		Knowledge Society
Primitive Society		Agricultural Society			Industrial Society		Information Society
Primitive Society		Agricultural Society			Industrial Society		Network Society
Primitive Society		Agricultural Society			Industrial Society		Ecological Society
Primitive Society		Agricultural Society			Industrial Society		Risk Society
G&H** Society	Horticultural Society	Agrarian Society	Agricultural Society		Industrial Society		
G&H Society	Horticultural Society	Pastoral Society	Agricultural Society		Industrial Society		
G&H Society	Pastoral Society	Agrarian Society	Traditional Civilization Society		Industrial Society		
Primitive Society		Slavery Society	Feudalism Society	Capitalism Society		Socialism (Communism) Society	
G&H Society	Horticultural Society	Pastoral Society	Agricultural Society	Capitalism Society			Postcapitalism Society
G&H Society	Horticultural Society	Pastoral Society	Agricultural Society		Industrial Society		Postindustrial Society

* The table is based on sources [6]
** G&H – gathering and hunting
▼ – time formation of strategic management from 1950's to 1960's.

Given the cyclical and closure of the time impossible the formation of goals to achieve them in the future, because the future as such in our usual (linear) understanding is not existing. It can be assumed that such a worldview initially appear due to the agrarian basis of the economy, when the whole life is subject to changing of seasons, and you can easily argue that a generation later everything will be as before. Accordingly, the formation of a strategic plan for the long term is absurd, and impossible manage development of organization taking into account the strategic perspective.

As part of the creationism logic God determines ontological essence of any organization. Forming their own unique missions by companies, organizations and institutions would be seen as heresy against God. So these attempts could not have a mass character. However, it should be noted that it is theoretically possible formation of mission in the context of God's purposes. Accordingly, the subject-object relationship in the development and implementation of the strategy is possible only with the direct "participation" of God. Direct implementation of the strategy is impossible.

In the understanding of "time" category is interrupted circular closure. Time takes the form of a vector that defines the movement from the "creation" by God to the time of "Last Judgment". The organization cannot deviate from this direction. The general vector of development for the organization is set by God. So "vision" of the future destined outside the organization.

Therefore, the formation of the strategy and using "management by objects" does not fit creationist logic.

Only the transition to the modern era creates the conditions for the formation and mass use of strategic management. Industrial society subjugates agricultural and secularization leads to the alienation of God functions in the direction of individuals and organizations. Ontological monopoly of God is destroyed. Physicists have proved that creation of World begins from the "Big Bang." Objective reality is perceived as reality without God and subject can cognize it directly.

Table 2

Key features of philosophical paradigms for the formation of a strategy *

Paradigm	Premodern (Indian religions)	Premodern (Abrahamic religions; Creationism)	Modern	Postmodern
Type of society	Prehistoric, agrarian	Agrarian	Industrial	Postindustrial, knowledge, risk
Entity (ontological aspect)	From nonexistence	From God	From the "Big Bang"	Not defined (cannot be determined)
Object	A copy with internal original	A copy with external original	Original	A copy without original
Subject	Inseparable from the existence	Aimed at cognition of God	The individual as "epistemological Robinson»	The existence of the "subject" and "object" is called into question. Only the text and context exist.
The subject-object relationship (Epistemological aspect)	The subject is identical to the object	The subject recognizes the object through God	The subject recognizes the object directly	
Time	Cyclically	Linear (from the creation to the "Last Judgment")	Linear, continuous, irreversible	Nonlinear, set of trajectories, reversible
Space	Live (each item corresponds to the "spirit")	Make alive by God	Dead (mechanistic model)	Virtual (can be constructed)

* The table is based on sources [6] and the author's own development.

The "arrow time" goes to infinity because offensive "Last Judgment" is replaced by "the heat death of the universe" and is postponed indefinitely in the distant future.

This is a set of philosophical presuppositions creates conditions for the formation of strategic management. The realization of this possibility has been started at the period of the emergence postmodern logic, or watching from the other side at the time of "sunset" of the modernity logic. A lot of organizations are finding the strength to predict and program their future only when the modern paradigm is completely covered by a retrospective glance. At the same time functioning of socio-economic system is becoming fully understandable not only in theory (mechanistic Newtonian), but in practices of management at the micro and macro levels.

The chronological gap between the appearance of the basic ideas of the modern era and the emergence of industrial society is at least 100 years, and if you count from the time of early modern ("New Time") is about 250 years old. Thus, it is difficult to predict how the logic of constructing postmodern translates into economic life in the future. It is already clear that it will be quite difficult to implement the theoretical basis of postmodern in strategic management. High complexity of the mission formation arises because of the ontological specificity of the postmodern. The uncertainty of the subject and the object makes it impossible to conduct a classical strategic analysis, formulation and implementation strategy. Features of the definition of the space-time continuum, as a virtual space with a variety of trajectories and the reversible time, are blocking formation of the vision and strategic objectives of the organization.

However, given that the practical transition to the logic of modernity cannot fully take place. So in the foreseeable future the transitional forms will be dominate and we can only suppose some of trends in strategic management.

Lack of opportunity to formation mission in the postmodern logic, cannot be regarded as an insurmountable obstacle to the further use of strategic management in practice. However given the role of the mission as the main tool of motivation of the personnel from it is not necessary to give up. Here it is advisable to apply the classical logic of Descartes: "I think therefore I am" (7, p.317], and uncover the ontological role of the organization through epistemological activity. We can make universal purpose of the organization like changing or formation virtual space and discourse, and the "vision" as the direction of these changes.

Virtual space could be constructed by strategist in much more greater scale than the real space. Therefore, initially the organization should not be reflect environment, it must form it to achieve success. This is corresponds with the concept of "blue ocean" [8]. Only possibilities for the formation these "blue oceans" is much more because of fundamentally new market niches. Formation of discourse in global scale lifts restrictions from "weak" starting position of the subject of the strategy, and creates preconditions for overcoming the strengths of competitors. Thus, the subject (organization) during realization of strategy not aimed on specific object

(users of strategy), but in aimed on the formation discourse, which also changes the potential object (consumers and other interested parties) and the subject itself (the organization).

Summing up the results can be demonstrated that only a modern logic allows generate full strategy in the usual form for business (table 3).

Table 3

The possibility of formation of strategy in the context of the logic of world view paradigms

Element strategy of the organization	Paradigm			
	Premodern (Indian religions)	Premodern (Abrahamic religions; Creationism)	Modern	Postmodern
Mission (unique)	–	+ / –	+	?
Values	+ / –	+ / –	+	+
Vision and goals	–	+ / –	+	+/-

Within the framework of other paradigms, such a possibility does not exist in a variety of ways. At the same time the least adapted to the use of strategic management is considered logic Indian religions. Strategic management in the logic of creationism is theoretically possible, provided the will of God is in each of the elements of the strategy. Postmodern, remaining largely the unknown with a positive point of view, contains both obvious limitations for the implementation of strategic management as well as the potential for its improvement.

Conclusions

1. Strategic management is a phenomenon of modernity that emerged in the sunset of its existence, which corresponds to the beginning of the postmodern logic formation. Organizations are able to use the holistic socio-economic picture of the world for forecasting and programming of its development.

2. Formation of strategic management in a primitive and agrarian society according to premodern logic cannot be due to differences in the ontological, epistemological and space-time perception of the world in comparison with modernity.

3. Transition to post-industrial society and the logic of postmodern forms the background for the change of strategic management. First of all, such a change will be implemented by changing the understanding of the category of "space" (in the direction of its virtualization) and the perception of the subject-object relationship of the organization and the external environment. You can predict the further transformation aspirations of the organization from "meeting client needs" to their formation through changes in common discourse.

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Вишневський О. С. Парадигмальні основи стратегічного управління

У статті досліджено світоглядні передумови формування стратегії та використання стратегічного управління в компаніях, організаціях та установах. Для цього розглянута сучасна структура стратегії, як продукт суб'єкт-об'єктних відносин в просторово-часовому континуумі. Сформульована і доведена гіпотеза залежності стратегічного управління від світоглядних інтерпретацій його окремих елементів. Продемонстровано неможливість зародження стратегічного управління (в сучасному його розумінні) в епоху, що передувала модерну, і обґрунтовано його формування в межах логіки мо-

дерну. Ставиться під сумнів можливість адекватного застосування сучасних підходів до стратегічного управління в рамках подальшого укорінення логіки постмодерну, яка передбачає перегляд суб'єкт-об'єктних відносин та зміщення реального простору в бік віртуального. У заключній частині розглядаються можливості адаптації сучасного стратегічного управління до логіки постмодерну.

Ключові слова: філософія стратегування, стратегія, стратегічне планування, стратегічне управління, модерн, премодерн, постмодерн.

Вишневский А. С. Парадигмальные основы стратегического управления

В статье исследованы мировоззренческие предпосылки формирования стратегии и использования стратегического управления в компаниях, организациях и учреждениях. Для этого рассмотрена современная структура стратегии, как продукта субъект-объектных отношений в пространственно-временном континууме. Сформулирована и доказана гипотеза зависимости стратегического управления от мировоззренческих интерпретаций его отдельных элементов. Показана невозможность зарождения стратегического управления (в современном его понимании) в эпоху предшествующую модерну и обосновано его формирование в рамках логики модерна. Ставится под сомнение возможность адекватного применение современных подходов к стратегическому управлению в рамках дальнейшего укоренении логики постмодерна, которая предполагает пересмотр субъект-объектных отношений и смещение реального пространства в сторону виртуального. В заключении рассматриваются возможности адаптации современного стратегического управления к логике постмодерна.

Ключевые слова: философия стратегирования, стратегия, стратегическое планирование, стратегическое управление, модерн, премодерн, постмодерн.

Vishnevsky A. S. Paradigmatic Basics of Strategic Management

The article presents the worldview prerequisites for the formation of strategy and the use of strategic management in companies, organizations and institutions. For this there was considered the present structure of the strategy as a product of the subject-object relations in space-time continuum. The hypothesis about accordance elements of strategic management with philosophical paradigms was formulated and proved. There were shown the impossibility of the creation of the Strategic Management (in its modern sense) in the era preceding the modernity and were described its formation in the logic of modernity. The adequacy using of current approaches to strategic management in logic of postmodernism was doubted. Because this paradigm involves the revision of the subject-object relationship and displacement from real space to virtual space. In conclusion considers the possibility adaptation of modern strategic management to the logic of postmodernism.

Keywords: philosophy of strategizing, strategy, strategic planning, strategic management, modern, premodern, postmodern.

Received by the editors: 27.08.2015
and final form 28.12.2015

Management of Innovations

UDC 658.51.012

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THE OVERVIEW OF MANUFACTURED SYSTEMS MODELS

Introduction

Questions of planning and management of production of industrial products identify key tasks for many theoretical disciplines. A large number of works, which devoted to the design of control systems of industrial processes, use the mathematical apparatus of the theory of operations research (Arrow KJ, Karlin S., Bir S. Pervozvanskii Shkurba AA VV Bessonov VA Biegel J. ., Prytkin BV), theory of optimization (M. Intriligator, Kempf K., Jakimovich SB, system dynamic (Fort rester J.), queuing theory (Gross D, Harris S.) theory of inventory management (Ryzhikov YI), the theory of planning and control production (Modigliani F., Holn C., Buslenko NP Dudorin VI, Emelyanov SV, Mitrofanov SP , Sokolitsyn SA, IM Razumov, Balashevich VA), the statistical theory of dynamical systems (AA Vlasov, Kazakov, IE, Krasovsky AA), the statistical theory of manufacturing systems (Azar -kov NA Demutsky VP Pignasty OM, Loktev II, Petrov Boris Tikhomirov IA, stroke-owls VD, Armbruster D., Ringhofer C.). Problems of a common methodology modeling of complex production and technical systems devoted to the works of domestic and eign scientists Arrow K.J., Solow RM, Wilson A. Vlasov VA, VM Glushkov, E. Goldratt, Zhang VG, LV Kantorovich, Letenko VA, Razumov IM Sokolitsyna SA, G. Haken, Shananina AA, Shkurba VV .. The application DES-, TQ- b Fluid-models in the design high-performance systems of control of production lines addressed in the works of Cassandras C., Heymann M., Hopp WJ, Eekelen J., Ramadge P., Roset B., Wardi Y., Wonham W., Buslenko NP, Bragin KA, Lysenko Yu, Rumentseva NV. We used mathematical models for decision administrations, design and technological decisions in conditions of uncertainty are devoted in the works of Buzacott JA, Harrison J., Shanthikumar JG, Bessonov VA Dudorina VI, Yermolyeva YM, Zaruba In .I., Zarubin BC, Ivanilova IP, Leontyev VV Lot's AV, Novikov DA, Prangishvili IV, Redkina AK, AK Tikhomirov, Tikhonov AN

Model of the strategic development of the enterprise is determined by the demand for manufactured products, directly. Industrial development has access during the production cycle to a limited set of technological resources, produces per unit of time, a limited count of products, determined the production capacity (effectiveness using technological equipment) [1]. Competitiveness of companies is largely characterized by the amount of output per unit of time, the duration of the production cycle and the volume of work in production (WIP: work in process or in-process inventory) [1,2]. There are taken like basic parameters of the model in the most works. Objects of labor, are in progress production, distributed along the process route. This distribution is determined by the dynamic of incoming items of work in the first process step and the output of finished products with the latest, non-uniformity of processing time and resource limits for each process step [1,3,4,5,6,7]. Optimization of parameters of control systems of production lines has led to the emergence of two interrelated problems of planning and production management. The direct problem consists in the over-estimation of the duration of the production cycle and production capacity of the system depending on the amount distributed along the route technological items of work [8, c.4591]. The inverse problem is to determine the required number of items of labor in progress its distribution along the process route for the production of finished products with an intensity in a predetermined time. To solve these tasks, use different models of controlled production process`, the main characteristics of some of them are listed below.

Discrete-event model of the production process (DES-model) [1,9,10].

Currently, in the design of control systems of production lines are widely used discrete-event model of the controlled process (Ankenman BE, Bekki JM, Fowler J., 2010) [9], based on a detailed simulation of the transfer of technological resources on the subject of work for each piece of equipment the production line. Uzsoy R. (2011) [10], Kacar N. (2012) used the DES-model for description of the production line for information about the status of objects of labor along the technological route. The error of models is identified

factors associated with the choice of the time scale planning. Using of DES- models planning production with a detailed graphics loading capacity utilization in the time allowed us to obtain the dependence of finished products from the distribution function objects of labor at technology operations (Lu S., [11]). Dispatching rules (Shkurba VV, [7]), describing the management strategy to regulate the appearance of discrete beginning and end of the treatment of the subject of labor at each processing operation. More difficult planning algorithms in the construction of dispatching rules optimize production cycle and the rate of motion of the objects of labor along the technology route (Lasserre J. [12]). Exacting corresponding DES-model real manufacturing process, can be arbitrarily high by detailing-description of the technological operation and increasing the number of repetitions of numerical experiment [13], it is theoretically limited accuracy of the computational scheme. The cost of machine time required for calculations (4 GHz processor frequency) million iterations of DES-model (Berg R., Lefeber E., [13]) for a party of 10 thousand details moving on technological route, consisting of 20 manufacturing operations range from a few hours to a few days [14]. At the same time, the required range of planning for systems control the parameters of the production line of modern production enterprises should not exceed a few minutes [15, p.7]. The next problem discrete simulation is due to the fact that pro-process transfer of technological resources on the subject of work as a result of techno logical operation is stochastic [8, c.4589]. Random is as a time of executing of technological operations and the amount of resources transferred to the item of labor. The duration calculation exceeds the required period of planning, stochastic process, transfer of technological resources on the subject of work and the lack of a final functional relationship between the parameters of the production line production line is not possible to effectively to use DES-model as a management tool parameters of modern industrial production line. DES-model which use to describe production systems, for example, to simulate the production lines for the production of semiconductor products [16], are "relatively slow" [8, c.4589], which does not allow to use them effectively to build systems of managing, and planning production.

Models of queuing theory (TQ-model) [1,5,17, 18] are widely used to describe the production lines in a steady state. For higher-performance computing is achieved by the transition from a discrete description in reference to the continuous work items described using average features. In terms of computing resources model of queuing theory [17] for stationary modes of operation of production lines are more efficient than DES-models that allow you to present analytic functional relationship between the stream parameters of the model. Dost exactly well represented TQ-model production lines in the works Buzacott JA, Shanthikumar JG, Chao X., Hopp WJ [18], Lefeber E. [19], who focused their attention to the mutual relationship between the duration of the production cycle of manufacturing a kit of parts and the number of items of work in interoperable storage devices. The line of products waiting to be processed, is a not finished work (WIP) in the production system. Reasonably accurate estimate of output parameters could only be obtained for the steady state operation of the production line, consisting of a small number of process operations. The constant presence of process in the operation of the production line requires utilization of the more advanced non-stationary models, resulting in a significant withdrawn time accounts and to the absence of evident functional relationship between the parameters of the production line, [14]. In describing the transition of unsteady processes TQ-models lose their advantages over the DES-models. Using of TQ-models for transients leads to excessive complexity of the task. A significant limitation of their use is that modern production lines consist of a large number of technological operations. As a rule, used cross-sectional models of queuing theory. Two-moments models that take into account this very dispersion of processing parameters objects of labor, to describe the production lines practically do not occur due to the complexity of their construction. Another limitation to the use of TQ-model is the fact that the basic formula derived for steady state ($t \to \infty$), which automatically implies the fulfillment of equation $\lambda < \mu$ (2), where λ - the intensity of the receipt of objects of labor for processing; μ - the intensity of the treatment of the subjects of labor.

In fact, for most of the production lines with the final production cycle of inequality $\lambda \geq \mu$ that prevents the use of well-developed apparatus of queuing theory for steady processes. The solution of these problems leads to high dimension of the problem, cumbersome calculations, requires considerable computing resources.

Models of fluid production processes (Fluid-model) [6,20,21].

A wide class of description controlled manufacturing processes include the transfer equation. This class is effectively used to describe the time-dependent processes, mainly deterministic manufacturing processes. Traditionally differ two approaches to the representation of the flow of technological objects of labor along the road. The first approach is the aggregation of items of work over the states [21] and in the following construction of the transport equations, the second, more common in the representation of the flow of products in a continuous fluid (Fuid-model, Forrester J., 1961, [6]), which are used to describe the transport equation. Conceptually discrete Fluid-model are m-th work place in the network cater for mass in the form of m-th storage

tank and the valve between the (m-1) th and m-th accumulate governing with the intensity μ_{m-1} of the movement of objects of labor between them (Kefeli, Uzsoy, Fathi, Kay, 2011) [1]:

$$\frac{dq_m}{dt} = \mu_{m-1} - \mu_m, \quad m = 1..M, \quad \mu_0 = \lambda, \qquad (1)$$

where q_m - work in progress (WIP) backlog before the m-th technological equipment (queue length), μ_m - the rate of processing of items of work on m-th process equipment, $\mu_0 = \lambda$ – the intensity of the receipt of the objects of labor in the first process step. Sampling of model due to convenience of relationship of equations of model with the specific parameters of stream site technological route of production line:-fabrication backlog in the storage q_m, processing rate of the subject of labor in the current μ_m and previous section μ_{m-1}. Equation (1) Fluid-models are continuous in time and discrete in the space, describe N the spatial parts of the stream of objects of labor. A set of ordinary differential equations (1) represents the time evolution of the queue length of the objects of the labor, can be represented in the form of equations Forrester (1961) [6], simulate the flow of items of work on technological route with discretely located manufacturing equipment. Stages of production disregarded as a change of continuous variables describing the state of the objects of the work in the technological space of states. Unlike a real fluid, states do not describe the physical space and indicate the degree of finishing parts or stage of production. As a variable that determines the position equipment in the calculation of the production lines often use variable ζ (m) represents the path that passes the subject of work as a result of treatment with an initial machining operation to the current technological operations at the general length of the process route D (m) [22]. At the same time as the change, which determines the rate of processing of objects of labor along the process route is taken velocity (m / h) movement of objects of labor on technological route production line (for conveyor lines - the velocity of the conveyor). The system of equations of the model (1) is represented as:

$$\frac{dq(t,\zeta_m)}{dt} = \mu(t,\zeta_{m-1}) - \mu(t,\zeta_m),$$
$$m = 1..M, \ \mu(0) = \lambda. \qquad (2)$$

If the count of technological operations in the technological route M >> 1 ($M \approx 10^2$ [14], $M \approx 250$ [8], $M \approx 300$ [23, s.445]) for building systems of control of industrial processes use Fluid-model (1), (2) becomes ineffective . Fluid-models lose advantages over TQ-models. However, the fact of having a large number of technological operations M >> 1 allows Implemented twist limit as $(\zeta_m - \Delta\zeta_{m-1}) = \Delta\zeta << D$ to the representation of the system of equations (2) in the form of non-stationary continuum (continuous coordinate space) model of line [8, c.4591]:

$$\mu(t,\zeta_m) = \mu(t,\zeta_{m-1}) + \left.\frac{\partial\mu(t,\zeta)}{\partial\zeta}\right|_{\zeta=\zeta_m} \Delta\zeta_m + 0\left(\Delta\zeta_m{}^2\right),$$
$$\left.\frac{\partial\rho(t,\zeta)}{\partial t}\right|_{\zeta=\zeta_m} = -\left.\frac{\partial\mu(t,\zeta)}{\partial\zeta}\right|_{\zeta=\zeta_m} + 0(\Delta\zeta_m), \ m = 1..M, \qquad (3)$$

where $\rho(t,\zeta_m) = q(t,\zeta_m) \big/ \Delta\zeta_m$ [1.21] - average density of objects of the labor-process backlog $q(t,\zeta_m)$ m-th technological operation for the area of technological route $]\zeta_{m-1},\zeta_m]$, $\mu(0) = \lambda$. The function $\mu(t,\zeta)$ is set, determines the rate of work of individual sections of the production line. The fact that the production processes are not fixed and stochastic makes it difficult for using Fluid-models in the systems of control sharpen-governmental lines require their further improvement. Another feature of the model is that the equation (3) must be supplemented by the equation of state, defining function $\mu(t,\zeta)$. The foundation for the construction of the equation of state is a furnish detailed interaction of objects of labor with technological equipment. This led to the need to use to build the equation of state DES-models with all of the above-described disadvantages. The use of empirical dependence defining function $\mu(t,\zeta)$ for time-dependent transient it turned-were futile because of the complexity of construction and lack of precision between numerical and practical results [6].

Along with the calculation of the quantitative distribution of the objects of labor along the technological route at a given in the time the intensity of incoming orders $\mu(0) = \lambda$ and the rate of production of finished products $\mu(D) = \mu_M$ of interest to the task determination for each technological process of stock level of different types of raw and materials needed to ensure the smooth running of the production line. This task of production planning in the classical formulation is formulated by Modigliani and F. Hohn F. (1955) [24] defines a template for intensive rate resources required for executing technical operations. The model of production proposed by Modigliani F. and Holn F., provided at discrete points in time, coordination the various parts of the production with raw material suppliers and consumers of the finished product. Total consumption of resources for technological operations sharpen-term lines associated with discrete moments in the time separated by periods of planning. It is possible to use simplified restrictions that give imprint on the behavior of resources in the aggregate model of optimization. Proposal approach is dominant in the scientific literature over the ten years [15]. However, having ignored the limitations when aggregating narrows the scope of the models (Johnson LA, Montgomery DC) [25], (Voß S., Woodruff DL).

Models using the function of wait [26].

When setting targets production planning raises the question of the extent of time of planning. Despite the fact that the production planning is carried out at discrete moments of time BPE to time, in fact, plans are generated in continuous time in accordance with the received orders. In this regard, Schneeweiss S. (2003) [27] suggested as the equation of state of the production system to use the function of wait periods of incoming orders and the parameters in the model is planned of production at discrete points in time. Under steady-state conditions, the expected duration of the production cycle is a nonlinear function of the use of resources (Buzacott JA, Shanthikumar JG [26], Hopp WJ [18]).

For the construction of nonstationary wait functions proposed to use discrete Fluid-models. Discrete Fluid-model of the managed process of "one product – one technological resource" is presented in the form of:

$$I_i = I_{i-1} + R_i - D_i = I_{i-1} + X_i - D_i,\ X_i = R_i, \quad (4)$$

where I_i is the number of the finished product for a period of planning Δt_i, $t_i = t_1 \ldots t_T$, R_i is the number of the material entered in the period Δt_i, D_i and X_i – the demand for products and production volume for the period Δt_i. The balance equation (4) corresponds to the simplest type of function of wait (cycle time is much less than the planning period). It is assumed that the incoming material to be processed in the period Δt_i available for use in the finish of the period. Because of the short duration of the production cycle T_d, $T_d << \Delta t_i$ the material is recycled for a period Δt_i and **work in progress (WIP)** can be neglected. When the duration T_d exceeds the number of scheduling periods, quantity of products for the period of planning I_i becomes dependent on the number of **work in progress**. Volume production X_i for the period Δt_i. related to the number of material R_{i-L}, enrolled at a time Δt_{i-L}, $L=1,2,3....$

$$I_i = I_{i-1} + X_i - D_i = I_{i-1} + R_{i-L} - D_i,\ X_i = R_{i-L}. \quad (5)$$

Balance Equation (5) widely used in the material requirements planning MRP-industrial systems (Vollmann, TE, 2005) [15], (Vob S., Woodruff DL, 2003) [28]. Although there are models (Hackman ST, Leachman RC, 1989) [29], in which the terms of delivery of technological resources are equal to the fractional number of periods of planning, overall, both for the theory and for industrial practice, is the assumption that the time of delivery is the whole the number of periods of planning. Most of the models impose restrictions on the type $X_i \le C_i$ of the maximum output X_i for the period of planning, where C_i – the maximum power output. At the end of the period t_i production system has a level of work in progress:

$$W_t = \sum_{n=i-L+1}^{i} R_n - \sum_{n=i+1}^{i+L} X_n \quad (6)$$

Material received in the period t_i stays in the system during time-interval $\Delta t_i = (t_i - t_{i-L})$. The common point of view on the use in the discrete Fluid- models MRP-systems of capacity constraints led to a task of linear programming:

$$\sum_{i=1}^{N}(h_i \cdot I_i + \sigma_i \cdot R_i) \to \min,\ I_i = I_{i-1} + R_{i-L} - D_i,$$
$$R_{i-L} \le C_i,\ R_i \ge 0,\ I_i \ge 0, \quad (7)$$

where h_i – the cost of the unit where the work in progress, σ_i – cost per unit of production of resources used at the time t_i.

Hopp W.J., Spearman M.L. [18], based on a detailed DES -model of the interaction the individual items of work with equipment, presented during the interval of the planning Δt_i the dependence of productivity on the production line, the intensity of the receipts of the needed for processing technological resources. Thus Liu J., Li C., Yang F., Wang H., Uzsoy R. [10] point to the need to use to solve the problem of large resources of computer time. For in-depth detailed study of sidered problem requires higher processor (Kacar N.). Application of these models give good agreement between the theoretical and practical information in the description of the quasi-stationary production processes. However, their ability to describe the non-linear relationship between the rate of motion of the objects of labor on technological route and duration of the production cycle at the intensive using technological resources is doubted [14].

The main problem in determining the extent of the time $\Delta t_i = (t_i - t_{i-L})$ is that the system of planning and management of production $T_d >> \Delta t_i$ requires an assessment of the consequences the impact of decisions on the status of the parameters of the production system. When using fixed intervals $\Delta t = (t_i - t_{i-L})$ are ignored effects fustic within a period of planning. Achieving maximum capacity generator interoperable backlog within the period of planning resulted in the setting of production line, which limited the volume of production X_i for the period Δt_i.

Model-driven production processes using clearing function [30,31].

The presence of repetitive tasks of production planning and control, for solution which used different models or their combinations, led to the idea of creating a unified theory of optimization of production systems inline with the way the organization of production, for the

construction of which Graves SC (1986) [30], Karmarkar US (1989) [31] proposed to use as the basic parameters of the state of the capacity $[\chi]_{CL}$ of the production system, the volume of **work in progress** W and the length of the production cycle T_d. To describe the behavior of the system parameters, Karmarkar US entered the equation of state $[\chi]_{CL} = \Phi(W)$ that specifies the relationship between capacity and volume of work in progress, which called clearing-function [31]. Clearing-function can be defined for a group of machines, equipment, production lines, one or more plants, including in the single production process. Clearing function $[\chi]_{CL} = \Phi(W) = const$ puts a fixed limit output production, assuming instantaneous build-cardinality of production, $[\chi]_{CL} = \Phi(W) = a \cdot W$, $a = const$ [30] suggests a fixed time to produce at full capacity, which in the presence of restriction-you start planning production for the period Δt_i, known as the combined clearing- function (Karmarkar US, 1989) [31]. An important class is the nonlinear clearing function used to build single-product models:

a) TQ-model M / M / 1 queue for the steady state [1]

$$[\chi]_{CL} = \Phi(W) = \frac{\mu \cdot W}{1 + W}, \qquad (8)$$

b) the fundamental diagram of model of traffic for the stationary state

$$[\chi]_{CL} = \Phi(W) = \mu \cdot W - W^2, \qquad (9)$$

c) Model G/M/1 queue for the steady state (Mehdi J.,1991) [1], (Berg R., 2004) [13, c.7]:

$$W = \frac{c_a^2 + c_s^2}{2} \cdot \frac{\rho^2}{1-\rho} + \rho, \ \rho = \frac{\lambda}{\mu} < 1. \qquad (10)$$

Where c_a^2 and c_s^2 represent the standard deviation of the admission requirements on products and time of processing, μ – the rate of processing of objects of labor λ – in-flow of objects of labor intensity in the first process step [1]. Model G / M / 1 queue for the steady state (10) is a development for model (8), the movement of objects of labor on technological route to the serial LAYOUT -technological equipment. Berg R. pointed out that the steady state model (10) is provided under the condition $\rho < 1$ [13, c.6]. When $\lambda \to \mu$ inter-operating backlogs infinitely large ($W \to \infty$), and if $\lambda > \mu$ equation (10) can not be used as it is assumed in its derivation $\rho = (\lambda / \mu) < 1$. The solution (10) with respect to $\rho < 1$, described in [1]:

$$\rho = \frac{\sqrt{(W+1)^2 + 4W(c^2 - 1)} - (W+1)}{2(c^2 - 1)}$$

at $c = \frac{c_a^2 + c_s^2}{2} > 1$. (11)

If $c \to 1$ the model M / M / 1 queue (8) is the limiting case of the model (10):

$$\lim_{c \to 1} \rho = \frac{W}{(W+1)}, \ \lim_{c \to 1} [\chi]_{CL} = \frac{\mu \cdot W}{1 + W}. \qquad (12)$$

Asmundsson JM (2006) [32] proposed distributed AC-functions (allocated clearing function) to simulate multi-product lines. AC-function are assuming that produced aggregate product, aggregating a technological resources for the production of individual products. An alternative approach is the representation of clearing-function as a sum of clearing-functions of individual products. Experimental data indicate that satisfactory results using AC-functions for products similar in nature consumption of resources. Intensity in consumption of resources at the same time expressed in units of processing time [1]. However, if the model of transport resources for each nomenclature objects of labor are complex, of the using of AC-functions does not allow to describe the manufacturing processes. Selçuk B., Fransoo J.C., Gok A.G. (2007) approximated clearing function piecewise linear function [1], which allow to use for optimization of the parameters production line unit for linear programming. Clearing-function can be obtained as analytically and as numerically using the TQ-models, DES-models, Fluid-models of production systems or determined empirically. Selçuk, B., Fransoo J.C., Gok A.G. (2007) [1] presented a methodic for constructing transitional clearing-functions analytically. Due to the fact that the operational information about these products and on the status of work in progress at the plant is closed, in most studies in structure clearing-function instead of the empirical data used TQ- and DES-model. The exceptions are the work Haeussler S., Missbauer H. (2012) [1], which is for the structure clearing-function applied derived from the production line digital media. Kacar N. (2012) used to build clearing-functions optimized parameters of line. Computational experiments related to the calculation of the parameters of the production lines of the company Intel, showed a good approximation of the calculated and experimental data for the established processes [1].

Despite the fact that clearing function are the best tool for definition of instant communication between the capacity of the production system and the volume of work in progress, the presence of a limited number of the parameters in the equation of state, does not allow effectively simulate the time because of changes of pa-

rameters of the production process due to factors processing products (Armbruster D, Kempf K., 2012) [1]. Attempts to create a time-dependent clearing-functions limited special refinements theoretical and experimental studies (Fonteijn J., Wienke M., 2012) [1]. As a refinement Lefeber E. (2008) [20] introduces clearing-function $[\chi]_{CL} = \Phi(W(t-\tau_0))$ effectively time of processing $\tau_0 = \sum_{m=0}^{M} \mu_m^{-1}$ (basic processing time) of objects of labor on technological operations. [13] Missbauer H (2009) attempted to expand the use of clearing-function to transient production processes. This drew attention to the significant dependence of the capacity of the production system, from initial distribution of objects of labor on technological route and the need to ensure the conditions for the transition of the production system from one steady state to another. Production processes are stochasticity [21,33], but despite this the construction of clearing-functions virtually no attention no paid to the study of the stability of stream parameters of production lines, there are no estimates of the time decay of random perturbation of stream parameters and assess their absolutely values. Research -line Intel's semiconductor manufacturing products, conducted Armbruster D., Kempf KG (2012) [1] showed that the daily stochastics perturbation factors of production parameters are the decay time from 1-2 days to a week, which requires the availability of insurance reserves and 20% of the units of the normative quantity. The assumption that the transition process is quasi-stationary significant limitation for the wide application of the equation of state (clearing-function) in an analytical form, built mainly using TQ- models.

Models of production processes, using the equation in part-derivatives. PDE-model [8].

In modern literature can to identify the main three types of models and their combination for the output equation of state determining the relationship of parameters of stream of production lines. This queuing model (TQ-model), discrete-event model (DES-model) and Fluid-model [1]. Each type of model has its advantages, but none of them are not suitable fully for modeling a steady and transient operation of production systems [13, p.2]. Existing TQ-models describe the flow lines in the steady state [17]. Using them in the description of transient process to excessive complexity and high costs of computer time. DES-models are used to describe the production lines in the transient and steady-state conditions, but are discrete and need much machine time. Fluid- models are oriented on the small number of intervals partitioning process route and inear stationary solutions within a given interval. The requirement for increasing the accuracy of the model increases the quantity of generalization, and to complicate the model due to the increase in dimension of the system of differential equations (1) (Kefeli A., Uzsoy R., 2011).

In the last decade in the design of industrial production lines, using models describing the behavior of the production system with the help of partial differential equations (PDE-model) [1,9,13,20,21]. Introduced class of models combines the advantages of TQ-models, DES- models and Fluid-models, much extension possibilities of designing control systems production lines. PDE-models generally are continuous, can be successfully used in the description of steady state and transient modes of work of the production lines, do not require a lot of computer time [1].

A key issue in the construction of PDE-model production lines is the choice of the coordinate system. A common approach is to use as a variable, which determines the place of processing of the subject of work in the technology route, the cost S (UAH.) transferred technology resources on the subject of work (Dabaghyan AV, 2008) [1] (Fedyukin VK 2004) $S \in [0, S_d]$ (S_d (UAH) - the self-cost of manufacturing production), effective time of processing of the subject of work τ_m (h), $\tau_m \in [0, \tau_M]$ (Eekelen J., 2006), (Ramadge P., Wonham W.) [1] ($\tau_M = \sum_{m=1}^{M} \Delta\tau_m$ (h) -general effective the time of processing of the subject of work, $\Delta\tau_m$ is the average time of processing of the subject of work in the m-th step of process) or the degree of incompleteness of manufacturing product χ (Armbruster D., Ringhofer S., Berg V., Lefeber E., 2004) [1] $x \in [0,1]$. The degree of incompleteness manufacturing product χ is the position of the subject of work in the technological route, which can be represented as a ratio of the average time $\Delta\tau_m$ to its total processing time [13, c.16]. For the object of labor, treated at the m-th operation, can be recorded $x = \frac{\tau_m}{\tau_M} = \left(\sum_{k=1}^{m} \Delta\tau_k \Big/ \sum_{k=1}^{M} \Delta\tau_k \right)$. Every time of processing $\tau_m = \sum_{k=1}^{m} \Delta\tau_k$ correspondence the value of resources $S_m = S(\tau_m)$ transferred on object of labor and total time τ_M - self-cost $S_d = S(\tau_M)$. Thus, the degree of incompleteness of manufacture of the product χ can be determined after a time of processing τ or cost-migrated cost on object of labor $S = S(\tau)$. It is suitable for modeling industrial production line with a generalized technological resource use dimensionless variable that determines the position of the subject of work in process flow [3]. Dimensionless variable $x = \tau_m / \tau_M$ used in the case where the model of production line does not consider the when re-nose for the structure of the labor resources (Armbruster D., Ringhofer C) [1]. For the model of xxx

line, which takes into account in the result of technological operations consumption several interrelated technological resources on the using which are the restrictions, the using of dimensionless variable x -is difficult. If you enter a function of the density of objects of labor $\rho(t,x)$ in the state x at time t, the total number of objects of work, which are in various stages of readiness is the value (Armbruster D., Ringhofer S.) [1,20,21]

$$W(t)=\int_0^1 \rho(t,x)dx \ , \ x\in[0,1]. \qquad (13)$$

Since the processing of objects of labor is stochastic, then in the results executing of the operation, the subject of work may be in a non-particular state [8, c.4544]. This allowed to record the average density of the objects of labor $\rho(t,x)$ (pcs.) and the flow of objects of labor $F(t,x)$ (pcs. / h) on technological route through the distribution function of the objects of labor $f(t,r,x)$ over the states $r=\Delta\tau_m^{-1}$ (Armbruster D., Ringhofer S., 2005) [1]:

$$\rho(t,x)=\int_0^\infty f(t,r,x)dr \ , \ F(t,x)=\int_0^\infty \frac{1}{r} f(t,r,x)dr \ . (14)$$

The position of the object of work in the space of states characterized by a point with co-ordinates $(q_1,q_2,..,q_j,..,q_n)$ that determine the quantitative value of the parameters of the object of labor. The state space is used in the construction of models of multithreaded lines, consuming during the production of multiple resources. Using in the one-dimensional description of the dimensionless variable x [1,3 for the depth study state of changing of state of the subject of labor is difficult. On the contrary, the using of as a variable parameter of the model S, which characterizes technological position of the subject of labor through a cost allows you to apply an elaborate mathematical apparatus of production functions [21], which allows summate resources by adding their values. However, despite the opening prospects through the using of the value changing in the state representation of the subject of work, the vast majority of authors (Armbruster D., Ringhofer S. (2005), Berg R., Lefeber E., Rooda J. (2008) [13] Wienke M., Fonteijn J., (2012), Kempf K., (2012) [16]), use PDE-model production lines with no restrictions on the consumption of technological resources, introduce for describing the state of the object of labor status variables (r,x).

In the PDE-model flow of objects of labor $F(t,x)=\rho(t,x)\cdot v(t,x)$ (capacity of the production line) is represented as the product of the density of objects of labor $\rho(t,x)$ and rate $v(t,x)$ their movement [33]. Assuming that the defective objects of labor don't exist (not sources and sinks), the movement of objects of labor on technological route satisfies the conservation law:

$$\frac{dQ}{dt}=\lambda-\mu \ , \ Q(t)=W(t)=\int_0^1 \rho(t,x)dx \ , \qquad (15)$$

where λ - the intensity of the flow of objects of work in the first process operation, μ - output production[1]. Equation (15) is an integral form of the conservation law, the number of objects of work in the process of processing, can be presented in the differential form [1]:

$$\frac{\partial\rho(t,x)}{\partial t}+\frac{\partial F(t,x)}{\partial S}=0, \ F(t,x)=\rho(t,x)\cdot v(t,x) \ . \qquad (16)$$

The boundary condition $F(t,0)=\lambda(t)$ specifies the **flow** blanks in the first operation. Profile of work in progress at the initial time is determined by the condition $\rho(0,S)=\rho_0(S)$ that characterizes the distribution of blanks on the technological operations of production lines. For a free flow line $\rho(0,S)=0$. Equation (16) provides the connection in the time distribution $\rho(t,x)$ density of objects of labor and rate of motion $F(t,x)$ (capacity of the production line) for each point x on technological route [21]. Inequality in the distribution of work in progress along the route due to different effective time of handling objects of work on each transaction. Uneven in the performance equipment along technological route determines the dynamics of changes in the density of objects of labor that substantially affects the capacity of the line. Models of production process, which contained in the equation (16) take into account the influence of internal factors on throughput capacity and restrictions determined by the maximum-manufacturer of the equipment and interoperable storage capacity. This allowed the PDE-models compete with DES-models, the advantage of which is that they allow analytic form of solution and does not require significant computation inflammatory resources. The difficulty of building a PDE-model is determined by the balance of the equation of the form (16) are not closed [13,21,33]. To close the equation (16) is supplemented by the equation of state. If the equation of state is given clearing linear function $\Phi(W)=\int_0^1 F(t,x)dx=c\int_0^1 \rho(t,x)\,dx=c\cdot W$, (Constant Proportion, Graves SC, 1986 [30]), the system of equations PDE-model:

$$\frac{\partial\rho(t,x)}{\partial t}+\frac{\partial F(t,x)}{\partial S}=0, \ v(t,x)=c=const$$
$$F(t,x)=\rho(t,x)\cdot c \qquad (17)$$

admits an analytic solution. If the velocity of movement of the objects of labor along the techno-logical route is constant $v(t,x)=c$, the flow of money for items of work, is stepping in time t = 0 to the first process step of production line (17) and has a solution:

$$c \cdot \rho(t,x) = H(c \cdot t - x) = \begin{cases} 0, & t < x/c, \\ 1, & t \geq x/c, \end{cases} \quad \lambda(t) = H(t). \tag{18}$$

Built-in model value $\tau = c^{-1}$ determines the length of the delay between the time of receipt of raw materials to the first operation and the time of release of the finished product. Constant speed of movement of objects of labor along technological route exists a constant time delay τ. Communication of flow of objects of work is presented linearly dependency. Next PDE-model (Lighthill-Whitham) [1] using the equation of state in the form of a non-linear dependence of the flux density $F(\rho)$ of the objects of labor ρ :

$$\frac{\partial \rho(t,x)}{\partial t} + \frac{\partial F(t,x)}{\partial x} = 0,$$

$$F(\rho) = \rho \cdot v(\rho) = \rho \cdot v_0 (1 - \frac{\rho}{R}), \ \frac{\rho}{R} \leq 1. \tag{19}$$

Widespread PDE-models of production lines containing stationary equations of state. The equation of state of production line for factory is presented by M / M / 1-model of queue with size $W(t)$, parameters λ, μ, W (15) and the duration of the production cycle $T_d = (1+W)/\mu$ for a stationary state determined dependency (D. Gross, C. Harris) [17] :

$$\lambda = \frac{\mu \cdot W}{1+W} \ \text{ where } T_d = \frac{1}{\mu - \lambda}, \ W = \frac{\lambda}{\mu - \lambda},$$

$$W(t) = \int_0^1 \rho(t,x)dx. \tag{20}$$

The velocity of the objects of labor $v(t,x)$ and local flow $F(t,x)$ for M / M / 1- model expressed in the intensity of output [13]

$$\frac{\partial \rho(t,x)}{\partial t} + \frac{\partial F(t,x)}{\partial S} = 0, \ v(t,x) \approx \frac{\mu}{1+W},$$

$$F(t,x) = \rho(t,x) \cdot v(t,x) \approx \frac{\mu \cdot \rho(t,x)}{1+W}. \tag{21}$$

The equation of state $F(t,x)$ in the integral form for a sustainable mode of work of production line (Armbruster D., Fonteijn J., Wienke M., 2012) has the form [1]

$$F(t,W) = \int_0^1 F(t,x)dx = \frac{\mu \cdot W}{1+W}. \tag{22}$$

M/M/1 model of clearing-function (6). Attempts to build sophisticated PDE-models of production lines, specifying the equation of state through the using of experimental measurements at the plant, a detailed simulation model or TQ-models [1]. Widely used in the study of production lines of models:

$$F(t,x) = \Phi(\rho) = \frac{\mu_0}{1+\rho(t,x)} \cdot \rho(t,x),$$

$$F(t,x) = \frac{\mu_0}{1+\rho(t,x)+k \cdot \rho(t,x)(1-x)}, \tag{23}$$

$$F(t,x) = k_1 \cdot (1 - e^{k_2 \cdot W}), \quad F(t,x) = \frac{k_1 \cdot W}{k_2 + W}, \tag{24}$$

$$F(t,x) = \frac{1-x}{\tau(t,x)\left(\int_0^1 \rho(t,z)dz - x \cdot \tau_0\right)} \cdot \rho(t,x),$$

$$\tau(t,x) = \frac{1}{\mu}, \tag{25}$$

who offered D.Armbruster, K.Kempf (2012) (23), J.Asmundsson., R.Uzsoy (24), Ringhofer On (2012) (25). $\tau(t,x)$ - the time required to complete the production of items of work which are in the step x; k, k_1, k_2 -technological factors; M-characteristic of the maximum storage capacity of generator.

Detailed analysis of the operation of the semiconductor of production line with xxx PDE-model (solid line) and DES-model (shading) performed Perdaen D. (2008), Lefeber E. (2010). [1] The characteristic behavior of the output stream objects of labor, calculated using PDE- model and DES-model (Lefeber E., 2010). The principal disadvantage of methods using of the DES-models is the extremely large number of calculations for complex production systems such as semiconductor production lines [14]. It is in this area of using PDE-models offer the highest prospects for the design of control systems of production lines. These methods are able to optimally combine the precision of DES-models when using of much less productive processors [13]. The using in PDE- models clearing-function exhibit significant promise at an early stage of development. A growing body of publications related to the development and refinement of the equation with state for PDE-models indicates that further development of the approach with the using of clearing-function is not effective. We need to develop statistical methods which to build a many moment PDE-models for transients, which for closing is used the time-dependent equation based on the mechanism of interaction of objects of labor between themselves and the equipment.

Kinetic models of controlled production processes [3,21,34].

In a series of work of Armbruster D, Ringhofer S., Lefeber E., Kempf K. [1,9,16] presented kinetic model

production lines. Armbruster D., Ringhofer S. (2004) introduce the distribution function $f(x,v,t)$ of the objects of labor conditions characterizing the number of details in the state x in the moment of time t. A typical approach with which defined to the evolution of the distribution function of the objects of labor at the states, is in the derivation of closed equations for the moments of the distribution function. Build of PDE- models using kinetic theory contains a hierarchical set of equations.

This allows you to go beyond the limits of applicability of the quasistatic models. The proposal method by Bogolyubov, based on the selection of a small parameter, **allows** you to trim the number of equations at the right level. With the using of the kinetic ap da written equations for the first moments of the distribution function of the objects of labor $f(x,v,t)$ (Armbruster D., Ringhofer C) [35, s.819]

$$\frac{\partial\rho(t,x)}{\partial t}+\frac{\partial\rho(t,x)\cdot v(t,x)}{\partial x}=0,$$
$$\frac{\partial v(t,x)}{\partial t}+v(t,x)\cdot\frac{\partial v(t,x)}{\partial x}=0, \qquad (26)$$

$$\rho(t,0)\cdot v(t,0)=\lambda(t)\,,\ v(t,1)=\frac{\mu}{1+W(t)} \qquad (27)$$

$$\frac{dv(t,0)}{dt}=-\sigma\left(v(t,0)-\frac{\mu}{1+W(t)}\right),\ \text{when}\ \lambda<\mu\,,$$
$$v(t,0)=\frac{\mu}{0{,}5+W(t)}\,,\ \text{when}\ \lambda\geq\mu\,. \qquad (28)$$

with boundary conditions (27) M / M / 1 model, resulting in steady resistant mode, where σ -experimental quantity. Integrating the first equation (26) with respect to x allows us to write the equation:

$$\frac{dW(t)}{dt}=\rho(t,0)\cdot v(t,0)-\rho(t,1)\cdot v(t,1)=$$
$$=\lambda(t)-\lambda\left(t-\frac{1}{c}\right), \qquad (29)$$

Which was received by Lefeber E. (2008) [1] from the very general considerations. It is known from practical studies that output from processing of the first product of occurs through some time of delay relative to the arrival time of the party processing [21]. In the transition from $\rho(t,x)$ to aggregate variables of the Fluid-model $W(t)$ (15) the effect of unevenly-dimensional distribution of the objects of labor along the process flow [5] and the availability of storage capacity constraints are not taken into account. The calculation results of streaming parameters of the production line, obtained with the using of model (26) - (28) are closer to the experimental data than the results of calculations using the M / M / 1 model (8), G / M / 1 -model (1.10), continuous Fluid-model (15) (Fonteijn J., Missbauer H.), although, according to Armbruster D. (2012), a detailed study of approximations associated by equations (26) - (28), in this moment not done. Not clear there was a question for which production systems which model is the most successful. Most governmental problems in the construction of kinetic models of production systems, lies in the fact that the kinetic equation is the integral-differential, the solution of which is a difficult mathematical problem [34]. In view of the complexity of the law of impact of equipment on the object of work, the kinetic equation can be not written in a precise form for the specific production processes. Even with simple assumptions about the nature of the impact of the equipment on the subject of labor can not obtain the exact analytical solutions. In this regard, of particular importance of build effective methods for the approximate solution of the kinetic equation of the production line.

Conclusions

This review of the basic models, which are used in the design systems of control of production lines. We consider the application of models and restrictions which prevent their effective use for the design of systems of control. Paying much attention to new types of models and kinetic models, containing equations in the partial differential equation (PDE-models). The analysis of the use of models for the simplest cases, the function-conditioning manufacturing production lines. The validity of the application is determined comparative analysis of results obtained using DES-model and PDE-model that studied. It is shown how to construct of the PDE-models statistical methods used to describe large systems. Wherein the general nature of the statistical regularities does not depend on the manner in which describes the behavior of a single object of labor. Using a statistical approach allows to obtain closed a many-balance equations (transport equation) not from phenomenological considerations, but based on the laws of motion of the individual items of work on technological route are certain production technology. Development and using of PDF-models requires addressing: of questions: The output of non-stationary equations of state, based on a detailed processing technology object of labor given hardware circuit. 2. Construction of multi-moment closed balance models for steady state and transient unsteady modes of operation of the production line. 3. Building a two-level models control parameters of the production line for steady-state and transient conditions taking into account the parameters of the equipment, scheme of arrangement of its priorities and movement of objects of labor.

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Тубичко К. В., Заруба В. Я., Пігнастий О. М., Ходусов В. Д. Огляд моделей промислових систем

У статті наведено огляд основних моделей виробничих систем. Виконано порівняльний аналіз різних типів моделей і показано області їх застосування. Надана коротка характеристика основних параметрів моделей. Детально розглянуто потокові моделі з використанням рівнянь в частинних похідних. Проведена їх класифікація залежно від виду рівняння стану. Розглянуто одномоментний і двохмоментний опис виробничого процесу.

Ключові слова: PDE-модель, виробнича лінія, масове виробництво, незавершене виробництво, система управління, балансові рівняння виробничої лінії, рівняння стану, дискретно-подієва модель, теорія масового обслуговування, модель рідини, Clearing-функція, квазістатичний процес, перехідний процес, стохастичний процес.

Тубычко Е. В., Заруба В. Я., Пигнастый О. М., Ходусов В. Д. Обзор моделей промышленных систем

В статье приведен обзор основных моделей производственных систем. Выполнен сравнительный анализ разных типов моделей и показаны области их применения. Дана краткая характеристика основных параметров моделей. Детально рассмотрены потоковые модели с использованием уравнений в частных производных. Проведена их классификация в зависимости от вида уравнения состояния. Рассмотрено одномоментное и двухмоментное описание производственного процесса.

Ключевые слова: PDE-модель, производственная линия, массовое производство, незавершенное производство, система управления, балансовые уравнения производственной линии, уравнение состояния, дискретно-событийная модель, теория массового обслуживания, модель жидкости, Clearing-функция, квазистатический процесс, переходный процесс, стохастический процесс.

Tubychko K. V., Zaruba V. Y., Pignasty O. M., Khodusov V. D. The Overview of Manufactured Systems Models

The article provides an overview of the main models of manufacturing systems. Here a comparative analysis of different types of models and shows their applications. In this article A brief description of the main model parameters. The detailed analysis of the streaming models with the using of partial differential equations. In this article is their classification depending on the equation of state. We examined the cross-sectional and two-moment description of the production process.

Keywords: PDE-model, production line, mass production, work in progress, management system, balance equations of the production line, equation of state, discrete-event model, queuing theory, model fluid, Clearing-function, quasistatic process, transient process, stochastic process.

Received by the editors: 23.11.2015
and final form 28.12.2015

UDC 334.716+519.86+658.15

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PLANNING OF STEADY INDUSTRIAL ENTERPRISE DEVELOPMENT UNDER CONDITION OF ENVIRONMENT INSTABILITY

Raising of problem. In the conditions of globalization of the world economy an important role is played by industrial enterprises. However existent priorities of development and functioning of enterprises often fall behind the requirements of modern society.

Forming of the modern economic system of Ukraine took place mainly in accordance with exogenous model, essence and the outline of which were stipulated by the development of the export oriented enterprises, fuel, energy and metallurgical complexes. Unfortunately, export expansion of these industries was not accompanied by a technological breakthrough, the production remained expensive, based on the use of cheap power sources and labour. The situation became urgent under the condition of economic crisis, and rapid fall in demand for products. Therefore for stabilizing and increase of level of competitiveness of economy of country urgent steps in the strategy of enterprises development of all industries are needed for entering the world market, in particular on the basis of the effective planning of their activities and development.

Analysis of the recent research works. The general approach to planning of enterprise activities is expounded in works of foreign and home authors : A. Henderson, W.Cooper, R.Dorfman, J. von Neiman, J.Riggs, P.Samuelson, A.Charns, I.Aramonov, A.Bakhtin, I.Bohomolov, N.Herasimov, Y.Kisliakov, W.Lihtenstein, F. Miszoakhmedov, B.Orazbaev, V.Zviagina, V.Surina, R.Tkachenko, O.Tsarkova, V.Chistiakova etc.

Primary most works of authors that engaged in the problems of development of plans of enterprise activities are based either on the experience and statistical or normative methods of plan drafting that under the condition of unstable environment can result in their inadequacy. As I.Prigozhin stated [1], "... it should be remembered that, although we in principle can know the initial conditions in the endless number of points, the future, nevertheless, remains unforeseeable fundamentally ". Therefore the problem of fundamental search of alternative methods of planning under the conditions of instability is actual, and is often touched upon in scientific literature [2-3]; the mechanism of planning of steady industrial enterprise development requires a further study and perfection in the context of Ukraine becoming a competitive participant of the world trade.

The aim of this article is description of conceptual model of planning of steady industrial enterprise development under the conditions of environment instability.

Exposition of basic material. In the conditions of environment instability, the primary objective of any enterprise is not to cease to exist, and to form pre-conditions for the further perspective profitable functioning. The main task of the modern stage of economy development is revival of industrial production and economy on the whole.

Steady development of the producing and economical system is investigation and description of quality of decisions made. The mechanism of providing stability of enterprise must be realized, foremost, by means of strategy forming of steady enterprise development. Steady development of enterprise is provided by the permanent increase of production of goods, and growth of the volume of sales. The permanent growth of sales is mediated by the growth of income of enterprise [2-3].However, the increase of production and sales volumes must be accompanied by the growth of efficiency indexes of the use of all resources of enterprise.

Planning envisages the development of aims and complex of measures, stipulating the sequence of results achievement taking into account the possibilities of the most effective use of resources by every productive subdivision and organization in general. According to aforesaid it is possible to draw the conclusion that planning is a well-organized process based on treatment of information for the development of project in certain parameters for the achievement of definite aims in the future. We understand under the term of the instrument of planning a set of resources, methods, approaches the enterprise will be able of using for planning the activity, defining prospects and possibilities of the organization in the achievement of the desired results.

The task of steady development of industrial enterprise planning consists in planning of such influence of management (management of enterprise) object on subject of management (subsystems of enterprise) where the greatest amount of the aims set is achieved.

We will describe the conceptual model of steady development of industrial enterprise planning that, unlike other approaches, is based on the stage-by-stage design of planning process of enterprise activities providing quality transformation of enterprise as a difficult

system and allowing it to define the effective trajectory of steady development (see Fig. 1).

Prognostication of basic economic indicators (for example, incomes, finding). An enterprise is a complex dynamic system with changes of its parameters in accordance with factors of environment. The smooth change of parameters will be described as a "step" ("sigmoid") function, playback of the transition of size from one level to other. For measuring the parameters of "smooth transition" it is suggested to use the sigmoid function of Boltzmann:

$$F(t) = A_1 + \frac{A_2 - A_1}{1 + e^{\frac{t - t_0}{\tau}}}, \qquad (1)$$

where A1 and A2 are values of economic indicator of F before and after process; t0 is a moment of time, in that a process takes place most intensively; τ it is a parameter stipulating transition duration.

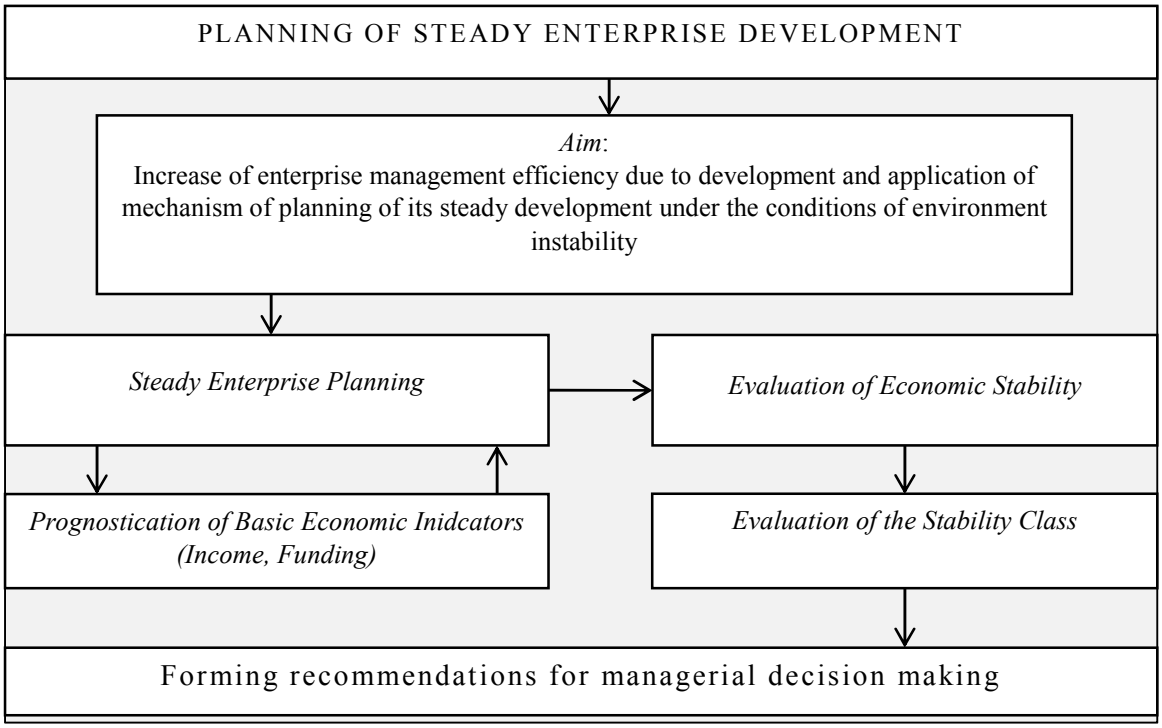


Fig. 1. Conceptual model of planning of industrial enterprise development

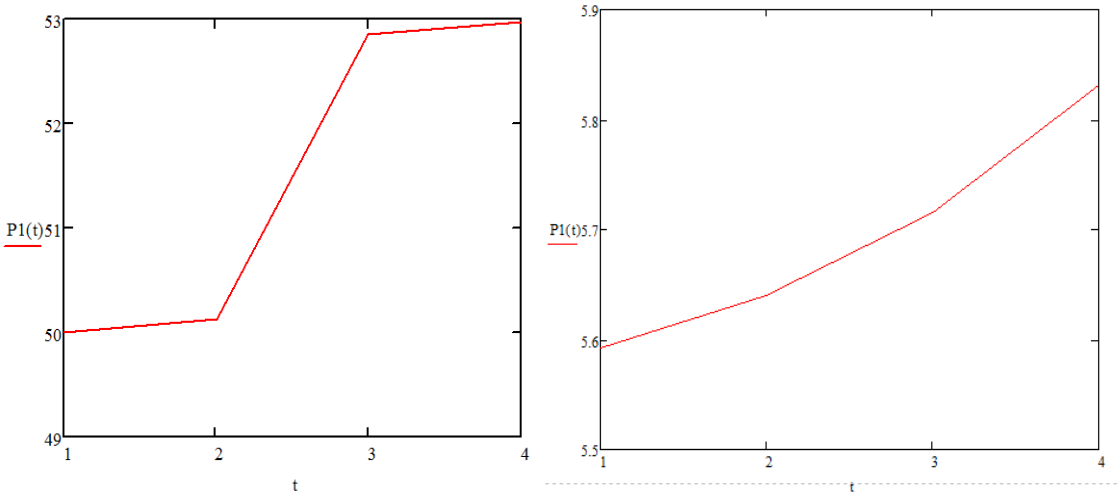
At the same time plenty of processes of different character, beginning in different moments of time and resulting in different economic indicators certain increase takes place on an industrial enterprise. Therefore the real dependence of F (t) can be considered imposition of great number of separate transitions. In this case dependence of F (t) it is expedient to present as a sum (superposition) of a few sigmoid functions (multisigmoid presentation). In case of arbitrary amount of sigmoid elements a formula for F (t) is written down in a kind [4]:

$$F(t) = A_1 + \sum_{i=1}^{N_S} \frac{A_{i+1} - A_i}{1 + \exp\left(\frac{6t - 3(t_{ni} + t_{ki})}{\Delta t_i}\right)}, \qquad (2)$$

where $(A_i - A_{i+1})$ – increase of economic indicator F in the process of i- go of transition; $t_{ні}$, $t_{кі}$ и Δt_i – ime of beginning, completions and duration of i- go of transient. Use of constant 3 it is possible to ground that at moving away from t_0 na 3τ the sigmoid function of Boltzmann practically fully goes out on a horizontal asymptote (an exact calculation shows that on 95,26 %).

From the mathematical point of view determination of parameters of multisigmoid for a concrete index after Nr of preceding years behaves to the tasks of class of approximation. It is necessary on the known set of points (ti, Fi) to pick up analytical expression of F (t), that will be maximally near to this set of points, and accordingly in the best measure will describe the present set of statistical data. In this case the set of points (ti, Fi) are data of accounting control, and analytical expression is searched as superpozition a few sigmoid F (t). Determination of parameters sigmoid function it is possible, for example, to produce the least-squares method (of MNK) [3, 5].

Example, prognostications of sizes of income and funding on the basis of approximation presented the sigmoid functions of Boltzmann on fig.2.



(1) income (2) funding

Fig. 2. Charts of sigmoid function of Boltzmann

Defining the trajectory of development of enterprise thus, further logically to estimate stability of this trajectory.

Carrying out the activity in a market environment, an enterprise will realize a progress trend is this acquisition of new quality, qualificatory stability of vital functions of organization, her height, that is inalienable part of planning.

Stability of industrial enterprise is a steady-state of enterprise in certain moment of time, characterizing the quality and effective indexes of business processes, and also ability of enterprise to save these indexes under act of constantly changing environment.

The estimation of economic stability it is suggested to execute according to a next algorithm [6-7]:

- forming of the informative field (collection of information);
- choice of standard index;
- statistical processing of data;
- setting of norms of data;
- analysis of connections between a standard index and criteria of economic stability;
- selection of coefficients of ponderability for the selected criteria of economic stability;
- construction of integral coefficient of economic stability of the system;
- estimation of level of economic stability of enterprise;
- determination of class of economic stability.

The integral coefficient of economic stability of the system we will present as a functional order taking into account gravimetric coefficients [6]:

$$ES = \sum_{p=1}^{h} w_p \cdot F_p - \sum_{u=1}^{m} w_u \cdot F_u, \qquad (3)$$

where F_p, F_u – functional criteria of the positive (stimulant) and negative (anti stimulant) affecting economic stability accordingly; w_p, w_u– specific gravity of meaningfulness of indexes F_p, F_u; h, m– amount of indexes positive (stimulant) and negative (anti stimulant) affecting economic stability of the system (enterprises) accordingly.

Gravimetric coefficients are determined as follows:

$$w_{i,j} = \frac{2 \cdot \sum_{p=1}^{j} \sum_{l=1}^{n} d_j}{\sum_{l=1}^{n} d_j \cdot \sum_{p=1}^{j} \frac{2 \cdot \sum_{p=1}^{j} \sum_{l=1}^{n} d_j}{\sum_{l=1}^{n} d_j}}, \qquad (4)$$

where n – amount of periods chosen for an analysis; p – amount of the selected indexes. For determination of parameter d_j in scientific literature [6] it is suggested to use weighing methodology that is base on comparison of chain indexes of the selected indexes F_{it} / F_{it-1}, with the chain index of standard index E_t / E_{t-1} on the basis of calculations of square root from the square of difference between them:

$$d_j = \sqrt{\left(\frac{E_t}{E_{t-1}} - \frac{F_{it}}{F_{it-1}}\right)^2} \qquad (5)$$

Further on the value of integral index of stability the class of stability is determined. In a table 1 description of classes of stability is presented for an integral index ES.

In a table 2 presented to recommendation on planning of steady development of enterprise depending on the class of stability, that was certain before.

Table 1

Value of index ES and description of stability

Class of stability	Value of index	Description
Absolute steady development	0,9<ES≤1	Economic position high-efficiency. A personnel is provided with a stable salary, the optimal terms of his labour, rest are created. Implementation does not cause a doubt the enterprise of all obligations.
High steady development	0,8< ES≤0,9	Characterized by the stable increase of technic-economic indexes within the limits of the pre-arranged values. The level of social material well-being of workers is high with the prospects of further development. The all-round analysis of activity of enterprise shows high probability of implementation to them all contractual obligations.
Normal steady development	0,7< ES≤0,8	Characterized by the even positive trend of indexes, but values of the below planned sizes. The analysis of activity of enterprise shows acceptable probability of implementation to them all basic obligations.
AV steady development	0,6< ES≤0,7	Economic position is provided by stable technic-economic indexes. An enterprise can have some difficulties with implementation of contractual obligations.
Low steady development	0,5 <ES≤0,6	The economic state is described by substantial gallops in characterized his indexes. An enterprise can have certain difficulties with implementation of contractual obligations.
Unsteady development	0,4< ES≤0,5	The basic elements of component support the values of indexes up-to-the-mark. Social security of personnel is not provided. An enterprise is constantly subject to the danger of derangement or worsening of implementation of the obligations.
Critical position	0,3<ES ≤0,4	Greater part of indexes is at low level, there are problems in a production or production distribution. There were difficulties, but implementation of basic obligations is yet possible.
Crisis position	ES<0,3	Characterized by failures in industrial and economic activity, producing of products is conducted irregularly, before produced production distribution does not come true. An enterprise is not able independently to execute contractual obligations.

Table 2

Recommendation

Value of index ES	Recommendation on planning of steady development of enterprise
[1-0,8]	continuation of functioning of enterprise on drawn up a plan; increase of values of plan technic-economic indexes with the purpose of achievement of new aims.
[0,8-0,6]	restructuring of enterprise, with the selection of profitable productive subdivisions; maintenance of the folded economic connections with partners; search of new partners for a collaboration.
[0,6-0,4]	decline of unit cost; reorganization of corresponding components or control system by an enterprise on the whole; perfection of pricing on the produced products (to bring down prices on commodities, to attract customers); analysis of profitability of products (to give mind on the production of more cost-effective goods).
<0,4	participating of enterprise is in the different investment and innovative programs, that gives an opportunity of the use of privileges on taxation and crediting; bringing in of new investors; taking of inventory of supplies and equipment with the purpose of exposure of surpluses for realization on market prices with the purpose of receipt of additional financial resources.

Conclusions

The use of the offered scheduling of development algorithm will allow to guidance to estimate stability of economic position of enterprise and rationally to dispose of the resources for the effective functioning in future. The method of multisigmoid approximation besides possibility of analysis of aleak economic processes allows with the high degree of reliability to forecast the set economic indicator on the nearest periods. The method of estimation of economic stability will allow to identify the level of stability on the basis of prognosis values. Application of the offered complex model an enterprise will allow to correct the business processes and provide the stable functioning in the future.

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Набережних Т. С., Шевченко Н. Ю. Планування сталого розвитку промислового підприємства в умовах нестабільності зовнішнього середовища

Обговорюється проблема пошуку принципово інших методів планування діяльності й розвитку підприємства в умовах нестабільності зовнішнього середовища. Відмічено, що пропонований в науковій літературі механізм планування стійкого розвитку промислового підприємства вимагає подальшого вивчення і вдосконалення в контексті становлення України як конкурентоздатного учасника світової торгівлі. У статті описана концептуальна модель планування стійкого розвитку промислового підприємства, яка, на відміну від інших підходів, базується на поетапному моделюванні процесу планування діяльності підприємства, що забезпечує якісну трансформацію підприємства як складної системи і дозволяє визначити ефективну траєкторію його стійкого розвитку. Пропонується використовувати метод мультисигмоїдальної апроксимації для прогнозування основних економічних показників на найближчі періоди. На основі прогнозних значень пропонується формувати траєкторію розвитку підприємства та здійснювати оцінку стійкості обраної траєкторії.

Ключові слова: підприємство, планування, стійкий розвиток, моделювання, мультисигмоїдальні функції, економічна стійкість.

Набережных Т. С., Шевченко Н. Ю. Планирование устойчивого развития промышленного предприятия в условиях нестабильности внешней среды

Обсуждается проблема поиска принципиально иных методов планирования деятельности и развития предприятия в условиях нестабильности внешней среды. Отмечено, что предлагаемый в научной литературе механизм планирования устойчивого развития промышленного предприятия требует дальнейшего изучения и совершенствования в контексте становления Украины как конкурентоспособного участника мировой торговли. В статье описана усовершенствованная концептуальная модель планирования устойчивого развития промышленного предприятия, которая, в отличие от других подходов, базируется на поэтапном моделировании процесса планирования деятельности предприятия, обеспечивающего качественную трансформацию предприятия как сложной системы и позволяющего определить эффективную траекторию его устойчивого развития. Предлагается использовать метод мультисигмоидальной аппроксимации для прогнозирования основных экономических показателей на ближайшие периоды. На основе прогнозных значений предлагается формировать траекторию развития предприятия и проводить оценку устойчивости выбранной траектории.

Ключевые слова: предприятие, планирование, устойчивое развитие, моделирование, мультисигмоидальные функции, экономическая устойчивость.

Naberezhnyh T. S., Shevchenko N. Yu. Planning of Steady Industrial Enterprise Development under Condition of Environment Instability

The problem of search fundamentally of another methods of planning of activity and development of enterprise comes into question in the conditions of environment instability. It is marked that the mechanism of planning of steady development of industrial enterprise offered in scientific literature requires a further study and perfection in the context of becoming of Ukraine as a competitive participant of world trade. The improved conceptual model of planning of steady development of industrial enterprise is described in the article, that, unlike other approaches, is based on the stage-by-stage design of process of planning of activity of enterprise, providing quality transformation of enterprise as a difficult system and allowing to define the effective trajectory of his steady development. It is suggested to use the method of multisigmoid approximation for prognostication of basic economic indicators on the nearest periods. On the basis of prognosis values it is suggested to form the trajectory of development of enterprise and conduct the estimation of stability of the chosen trajectory.

Keywords: enterprise, planning, steady development, design, multisigmoid functions, economic stability.

Received by the editors: 04.09.2015
and final form 28.12.2015

Management of Labour and Safety

UDC 331.108:332.1

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METHODOLOGICAL PRINCIPLES OF PERSONNEL POLICY FORMING IN THE CONTEXT OF THE INNOVATIVE DEVELOPMENT OF THE REGION

Problem statement. Effective regional personnel policy underlies the strategy of innovative development of industrial and economic activity in the region and should comply with this strategy. Nowadays, in the current economic situation, there is an urgent need to take drastic measures to prevent the negative impact of several factors on the development of human resource capacity of the regional economy. If do not give sufficient attention to this matter in time, in the future there is a direct threat to reproduce personnel for innovative development and reducing its capacity. One of the most dangerous challenges, in our opinion, is a high demand of qualified personnel under high unemployment at once, especially among youth. At the same time, regional personnel policy often has unsystematic nature, there are no long-term prospects in the preparation and using of personnel, and therefore it is inconsistent with economic and social programs of the territories development, there is no considered system of staff selection and transfer.

Analysis of researches and publications. The various aspects of regional personnel policy are highlighted in studies of A. Babenko, Z. Varnaliy, A. Doronina [1], S. Kalinina, A. Colot, E. Libanova, L. Lisohor, N. Lukyanchenko, M. Murashko, O. Novikova, V. Nykyforenko, V. Petyuh, G. Sydunova [2] d. Shchokin [3], A. Yakovenko [4], O. Jakubowskiy [5].

At the same time, recognizing the value of scientific researches of these authors it should be noticed that the conceptual basis of personnel policy forming of the region remain under-developed, especially in the context of its innovative development.

The purpose of article is the working out of the methodological principles of personnel policy forming in the context of the region innovative development.

Statement of the basic material. Odessa region has powerful personnel. At the same time, there is insufficient demand of enterprises for workers in professions that provide a high level of knowledge in physical, mathematical and engineering sciences, the presence of unbalance of labor demand and its supply of professional qualification and insufficient level of individuals with professional skills that are looking for a job, the presence of chronic demand for highly engineering skilled workers and labour for the production sector. During the period 2005 – 2013 years the number of employees of scientific organizations in the Odessa region was decreased by 34.6%, and the number of professionals who carry out scientific and technical work - by 45.1% [6]. There were engaged in science only 17.4% doctors and 10.2% candidates of sciences in 2013. It is noted the failure of replenish staff scientific corps with graduates of universities, research organizations and institutions do not have a sufficient number of skilled professionals that can provide the transfer of research results and its elaborations for their development in production, the lack of effectiveness of training workers to fit the modern production requirements. So the urgent question is to work out the conceptual basis of effective personnel policy.

At this stage of society functioning the personnel policy has been and is one of the key factors of its development and defines the main content and nature of all kinds of social control in Ukraine. [7]

Regional HR policy is a specific form of sectoral and territorial management combination, its main tasks is to ensure the region's population with jobs, satisfaction branch staffing requirements, additional staffing requirements of enterprises and region infrastructure, rational distribution of staff for activities and sectors, providing high efficiency of their usage in enterprises and organizations of the region.

Personnel policy in current conditions should be based on the priority of the human person and be warrantabled by solid scientific basis. Unfortunately, in reality, the creation and, especially, the implementation of the public, as well as regional and municipal personnel policy, suffers from a number of difficulties. Our researches showed that the main limiting factors are:

- Socio-political instability in the country, the economy crisis;
- Carelessness of society strategic orientation;
- Instability of power structure and management at national, regional and local levels;
- Weak legislative and normative base at national, regional and municipal levels;
- Insufficient elaboration of theoretical and methodological basis of personnel activity in terms of innovative development, formation of civil society and market economy.

Nowadays innovative and socialized type of regional economy development makes the more stringent demands system of staff. This is the knowledge of transfer mechanism of the economy to an innovative path of development, the ability of professional and quick adaptation to new innovative processes, continuous professional development, the maximum realization of the potential in the labor activity, tendency to team working style for achieving the organization goals and others. All of this in complex makes a fundamental need to develop the implementation of personnel policy that is adapted to specific regional conditions. In such conditions not only the role of regional human resources policy increases, but also specifically within individual organizations. Personnel policy should be formed on the base of the innovative development strategy of the region and represents a set of promising targets of personnel potential usage in the region, including its motivation, development, updating and improvement.

According to our researches we identified the following key areas of personnel policy in the region:

- The policy of human resources formation (using internal and external sources);
- The policy of security enforcement and protection of human resources;
- The policy of human resources l professional progress;
- The policy of professional education system development in the region;
- An employment policy and professional labor market development;
- The policy of human resources demand ensuring;
- The policy of material and morale encouragement of employees;
- The mobilization policy of formation of professional, moral and patriotic human resources.

We defined the strategy of regional human resources management as a system of set parameters of formation, motivational stimulus, development, improvement and effective usage of human resources for achieving innovative development goals of the region. In terms of this approach, personnel policy, in our opinion, is an integrated system that includes the objectives and principles, and formed on its basis methods, forms, elements and criteria of personnel operations, that are aimed at training, motivation and mobilization of personnel in the region to achieve its scientific and technical, productive-economic and social problems.

We believe that the strategy of personnel policy in the region should consider and be directed to:

- The achievement of the strategic goals of innovative and socio-economic development of the region and the objectives of human resources policy;
- The formation of principles and ideology of personnel policy. The ideology of personnel policy should be reflected in the documentary form and implemented by all subjects of the region;
- The determining of balance between economic and social efficiency of human resources usage in the region.

The mechanism of regional human resources policy formation involves the usage of various forms, methods and tools of personnel operations, and also new information management technologies that are aimed at updating HR management to ensure the effective functioning of the human resources management in the region to address the production, technical and technological problems.

Regional HR policy must meet the conditions and requirements of the external and internal environment. Studies have identified a number of factors and environmental conditions which significantly affect to the content and mechanism of implementation of personnel policy. Among these are:

- Regulatory and legal documents on labor;
- The level of market competition;
- Specifics of national structure, the level and quality of life:
- The conditions of the labor market in the region;
- The average regional wages and cost of living;
- The location of the region and others.

The internal factors and conditions of personnel policy formation in the region include:

- The conception and development strategy of the region;
- The human resources formation strategy;
- The formed mechanism of management;
- The style and methods of work and others.

Thus, on the one hand the regional personnel policy is a long-term document, on the other hand it must be constantly adjusted in accordance with the formed situation and the need to address the current problems related to the innovative development of the regional economy.

The main objectives of personnel policy that are adapted to the conditions of the region and aimed at its innovative development are:

- The formation, development and ensuring of the human recourses renewal of the region in accordance with its strategy of innovative development and current challenges;
- An improvement of human resource management in the region;
- An analysis of labor resources usage and optimization of the staff number;
- The creation of the conditions for high performance and labour resources efficiency;
- The formation of favorable social and labor relations;
- The ensuring of the current and prospective economic stability of the region organizations and the economic situation of its employees;
- Innovative and socio-economic development of the region.

The formation of regional innovation system and its human resource capacity inseparably are linked. The personnel policy formation of innovative development of the region should be based on the following assumptions:

- The flexibility and adaptability of formation strategy and human recourses development of the region;
- The constant updating of techniques, technologies and approaches to the personnel policy formation and human resource capacity of the region;
- The usage of flexible mechanisms and innovative technologies of personnel;
- The free choice of labor activity by the employee;
- The social responsibility in the formation, development and usage of human resources;
- The right of innovative activity subjects to solve independently the issue of human resources renewal;
- The active participation of all subjects of the region in development and implementation of personnel policy.

One of the major problem of regional human resources policy in terms of innovative development is to improve the methods of determine the optimum staffing requirements of appropriate skills level in the region in whole and for its individual branches.

By developing the human resources policy of regional innovative development the system of regional and sectoral standards should be used, which can be divided into two main groups. The first allows to determine the perspective of formation and training of innovative personnel, and the second determines key points that characterize the distribution and use of personnel.

The first group of normative documents that have to be developed for innovative process staff includes the qualifying characteristics of technical staff and specialists of the main groups of specialties and occupations for the five-year and long-term (10 years) period; the standards of skilled workers quantity and employees in the industrial sector including the specific of the region; innovative staff saturation standards of sectors; the standards that characterize the educational process organization (the lists of specialties and occupations, curriculums and training programs, teachers working load standards etc.).

The regulations system that need to be developed and applied in the distribution and usage stages of innovative staff, covers the management structures of business entities in the context of industry and their staff; lists of engineering positions and professionals, passports of organizations, enterprises with explanation of their human recourses that are needed for innovation development, ratio regulations between the different categories of innovative staff and others.

Work on the creation and specification of these regulations is rather time-taking and requires the participation of a large number of organizations and institutions. Thus, qualifying characteristics according to the prepared professionals profile usually are developed by institutes of higher education. Currently, to participate in its development should be involved business-structures that use trained professionals from the institutes of higher education that will be considered in more detail below. The positions lists are developed and approved by branch ministries and departments (they are the lists of positions in the enterprises and organizations that have to be replaced by graduates, indicating the specialty and level of education; there are reasonable ratios of professionals of different levels of higher education). However, considering the rapid development of scientific and technological progress and acceleration of the innovation process they do not always meet the urgent production needs.

In general, the usage of the position list allows accurately determine the need of innovative human resources for the future; to set the standard saturation of necessary specialists of the particular industry (as a ratio of the number of posts which are replaced by specialists to the planned number of employees) in the region; to identify experts usage efficiency.

For regional level of personnel policy development the great importance has the explanation of quantity standards of skilled workers and professionals for the innovative development of various industrial sectors of regional economy. There is the following sequence of the standards development:

a) Selection of typical industrial units according to the industry of the region and its classification;

b) Determination of the factors that are influenced on the number of skilled workers and professionals that are engaged in innovative activity;

a) Development of inspection programs for selected units;

d) Collection of the necessary statistical information;

d) Processing, systematization and generalization of survey results;

e) Development of formulas to determine the quantity standards of skilled workers and professionals that are engaged in innovative activity;

g) Determination of correction factors according to the innovative development of production and updating of formulas;

c) Explanation of ratio of skilled workers and professionals that are needed for the passing of the innovative process.

The need of a new personnel policy, including regional, is related to the tendencies changing that are occurred in economic development both at the global and regional levels. The economic crisis of the last decade shows that uncritical usage of existing market mechanisms and government mechanisms still does not provide sustained economic growth, even of the most developed countries. Such crisis, as the practice has shown, in a less degree affects to those countries that

implemented an active industrial policy aimed at innovative development of its economy. As a result, currently, first of all, are highlighted the strategies of development of scientific, technological, industrial and human resources, which are able to stabilize and speed up economic development, as expressed, for example, in the growth of common strategic researches and a number of other trends, there the reindustrialization is taken the most important place.

Today the place for the production is determined not so much with its associated costs, but also with factors such as access to skilled labor, an availability of infrastructure, the size of domestic demand and many others. Dramatically increase the demands for qualified personnel and reduces the importance of labor costs as required innovative specialists who possess the necessary competencies, which are not enough in countries with cheap labor market. These specialists are trained, usually in developed countries and demand higher wages. Industrial production returns to countries with more capacious internal market, with high level of purchasing power and a skilled labour.

The need of reindustrialization as the future path of economic development of Ukraine is related to the changing nature of active competition, dynamics and structure of demand, the appearance of new technologies and new business-models of development. The principle of new industrialization includes the main engine of economic development as the industrial sector that can provide the highest growth rate of labor productivity, an increasing of workplaces and reducing of unemployment, fast and qualitative economic growth and improvement of the overall competitiveness of the country.

Conclusions and recommendations for further researches. Thus, summarizing that the personnel policy should be formed on the basis of the innovative development strategy of the region and presents a set of prospective targets of usage in the region its human resources.

In the context of these objectives according to Odessa region and regions of Ukraine it is worth to mention that further studies need to focus on a solving the issue of the appropriate infrastructure to ensure the formation of personnel potential of innovative activity.

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Гаврилов М. С., Зеркіна О. О. Методологічні засади формування кадрової політики в контексті інноваційного розвитку регіону

В статті викладено методологічні засади формування кадрової політики в контексті інноваційного розвитку регіону. З'ясовано, що створення і особливо реалізація державної, а також регіональної і муніципальної кадрової політики відчуває на собі ряд складнощів. Виявлено складові концепції регіональної кадрової політики, що включають цілі та завдання, механізм, принципи, стратегію. Викладено концептуальні засади механізму формування кадрової політики регіону. Проведені дослідження виявили ряд факторів і умов зовнішнього і внутрішнього середовища, які суттєвим чином впливають на зміст і механізм реалізації кадрової політики. Визначено дві групи регіональних та галузевих нормативів, які необхідно використовувати при розробці регіональної кадрової політики інноваційного розвитку регіону. Перша дозволяє визначити перспективу у формуванні та підготовці інноваційних кадрів, а друга орієнтири, що характеризують розподіл і використання кадрів.

Ключові слова: кадри, кадрова політика, концепція кадрової політики, стратегія, потреба в інноваційних кадрах, нормативні документи.

Гаврилов М. С., Зеркина О. А. Методологические основы формирования кадровой политики в контексте инновационного развития региона

В статье изложены методологические основы формирования кадровой политики в контексте инновационного развития региона. Выяснено, что создание и реализация государственной, а также региональной и муниципальной кадровой политики испытывает на себе ряд сложностей. Выявлены составляющие концепции региональной кадровой политики, включающие цели и задачи, механизм, принципы, стратегию. Изложены концептуальные основы механизма формирования кадровой политики региона. Проведенные исследования выявили

ряд факторов и условий внешней и внутренней среды, которые существенным образом влияют на содержание и механизм реализации кадровой политики. Определены две группы региональных и отраслевых нормативов, которые необходимо использовать при разработке региональной кадровой политики инновационного развития региона. Первая группа позволяет определить перспективу в формировании и подготовке инновационных кадров, а вторая ориентиры, характеризующие распределение и использование кадров.

Ключевые слова: кадры, кадровая политика, концепция кадровой политики, стратегия, потребность в инновационных кадрах, нормативные документы.

Gavrilov M. S., Zerkina O. A. Methodological Bases of Personnel Policy Formation in the Context of Innovative Development of the Region

The article discusses methodological basis of personnel policy formation in the context of innovative development of the region. It was found out that establishment and implementation of the state personnel policy, as well as regional and municipal personnel policy, faces a number of difficulties. The components of the concept of regional personnel policy were identified including goals and objectives, mechanisms, principles and strategy. The conceptual basis of mechanism of personnel policy of the region was developed. Conducted studies revealed a number of factors and conditions of external and internal environment, which significantly affects the content and mechanism of implementation of personnel policies. Two groups of regional and sectoral regulations were identified, which must be used in the regional personnel policy for innovative development of the region. The first group helps to determine the perspective of formation and training of innovative personnel and the second group determines the ways of distribution and involvement of personnel.

Keywords: personnel, personnel policy, concept of human resources policy, strategy, need for innovative personnel, normative regulations.

Received by the editors: 30.11.2015
and final form 28.12.2015

UDC 331.101.262:334.716:330.341.1

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FORMALIZATION OF AN INDUSTRIAL ENTERPRISE HUMAN CAPITAL UNDER THE INNOVATION DEVELOPMENT CONDITIONS

Setting the problem. The necessity of making the innovative activities of Ukraine's industrial enterprises more active is called upon by the growth of the European integration endeavors because of joining the World Trade Organization. This requires an increase in the competitiveness of indigenous products. The observed increase of the innovative activities of industrial enterprises is related to the change of technologies and purchase of the new equipments. The produce innovations are implemented on a comparatively low level, and this situation is largely accounted for by the current labor market problem of the qualified personnel deficit in industries. The reasons for this are inadequacy of the volumes and quality of the workforce training at the vocational schools as well as the staff decrease at the research organizations and lesser numbers of the qualified personnel engaged in scientific and research and technical work. In line with this, one of the reasons of the personnel's low innovative enthusiasmis the personnel's inadequate motivation for development and innovations.

The value of the notion "human capital" is explained for by the following reasons: in the human capital conception, a person is treated in the integrity of her/his economic, social and individual aspects; in the "human capital" notion, studied in their complex are three groups of qualities and capacities which characterize the person in the process of her/his professional activity: physical, intellectual and psychological; treatment of the person's health, knowledge and abilities as the capital which brings profit and which promotes the need for investments into the person in different segments and on all levels; the "human capital" characterizes a free personalitywjo is a full-fledged personality at the labor market.

The last research analysis. The conceptual foundations of the human capital theory are laid out by such foreign researchers as L. Thurow [5], G. Becker [6], T. Shultz [7], H. Bowen [10]. The theoretical and practical aspects of the human capital formalization as an inseparable part of the non-material resources under the innovative development conditions have been treated in the works of the home country and foreign researchers: O. Grishnov [3], P. Kapelyushnikov [9], Robert S. Kaplan, David P. Norton [1], P. Drucker [13] and many others.

The science has approaches to how to manage the separate elements of the human capital under the innovation capital conditions. This does not allow to run the complex regulation of the human capital components for effective mastering and untilization of the innovations.

That is why some questions which are related to formalization and management of the human capital of industrial enterprises remain unsolved and they require further research.

The aim of the article lies in defining the essence of the human capital on the basis of generalizing the theoretical and practical approaches to its formalization under the conditions of innovative development.

The main part. The rapid growth of the significance of the non-material assets since the end of the last century and up to nowadays is determined first and foremost by the changes at the modern markets. These changes have to do with globalization of economy, increased dynamics of demand, individualization of use and, subsequently, growth of demand for innovative products and services. As a result, information and knowledge become basic factors of production in modern economy while the highest value is given to those assets which have intellectual basis.

Investments into non-material assets came to outweigh those into the material ones, and the emphasis is made on the non-material assets being the most important source of a stable formation of the cost of an enterprise. The foreign [1, p.15] and home country [2, p. 150] authors' research showed that the 40% of the market cost of the company is not reflected in the balance accounts. For enterprises in the high-technology industries, this figure amounts to 50% and more.

At the present stage of economy development, the human capital as a major element of the non-material assets is treated as one of the main components of the strategy for the social development and economic growth. In the developed countries the significance of the human capital as one of the crucial factors of forming a new qualitative level of the society and economy grows up along with an increased influence of education on these processes. The choice priorities in the development of the national education and professional training, increased investments into the personnel will ensure our

country's foremost positions in the world economy [3, p.93].As follows from the accounts of the State Committee for Statistics, over 300,000 people annually master new professions directly at the working place, in production, which is much more as compared to the qualified personnel released by the vocational schools. At the same time, the worker's qualification is annually upgraded at the working site by over a million people. Such a situation is accounted for not only by inadequacy of the volumes and lines of the vocational school training to the needs of employers but, in the first place, by the fact that a rapid growth of science and technology requires from the people involved in production processes a continuous upgrading of knowledge and skills as well as by the fact that at present the vocational school training covers five hundred professions whereas there are over five thousand professions in production [4, p. 26].The qualifications are upgraded most effectively by the industrial enterprise workers but the periodicity of qualification upgrading is much lower of the normative one practiced in the European Union countries. The qualification level of a considerable number of the personnel in our country does not meet the needs of the modern production while the system of upgrading the qualifications and education of the personnel requires a further development and improvement on the basis of the foreign countries experience [4, p. 27].

Thus the labor market trends affect the innovative activities of enterprises and the opposite influence is also true. Experience shows that active innovative activities shape the need in the qualified personnel whereas reductions in the numbers of the research design-and technology personnel have a negative effect on the innovative development of enterprises. Despite the imbalance of demand and supply at the labor market there is a more active utilization of the innovative products in 2010 all over the industry. As compared with 2010, the specific weight of the innovative enterprises increased in 2011 by 0.8 %, which is accounted for by introduction of the new technological processes and machinery.

One of the factors that contributed to the increase in the number of product innovations is a strategic correspondence of creating cost from the non-material assets. Fig. 1 shows a process of creating cost from the non-material assets under the innovation development conditions.

A special place among the three kinds of the non-material assets belongs to the human capital.

There are many definitions of the "human capital". Below are a few of them.

In L. Thurow's treatment, the human capital incorporates "productive abilities, endowments and knowledge" [5, p.15]. G. Becker gives another definition of this notion: "the human capital is formed at the expense of investments into a person, among which there are investments into education, training at the production site, expenses on health protection, migration and a search for information about prices and profits"[6, p.5].

T. Shultz and E. Dolan and D. Lindsay give a similar definition of the human capital. T. Shultz: it is development of knowledge and capacities due to "school education, training at the work site, strengthening of health and the growing reserve of the economic information" [7, p. 64-65];E. Dolan and D. Lindsay: the human capital is a form of mental abilities which are obtained due to "… formal study, education or on the basis of the practical experience" [8, p.256].

These definitions of the human have a similarity to the definitions of the labor potential. However, in the definitions that will follow a basic purpose of the human capital is revealed, namely to produce goods and provide services, bring bargain and profits.

Thus, P.I. Kapelyushnikov treats the human capital as "stock of knowledge capacities and motivations which everybody has … and … which make up the capital as their formation requires the diversion of funds at the expense of the current expenditures, but at the same time they become a source of increase of productivity and earnings in the future"[9, p.4].

With Bowen H.R., the human capital "is made up of the acquired knowledge, habits, motivation and energy with which human beings are endowed and which can be used during a certain time for the purpose of producing goods and providing services" [10, p. 362].

In the paper written by V. Kutsenko and M. Yevtushenko, the human capital is "a sum total of knowledge, capacities and qualifications, as an ability of the qualified workforce to create profit as part of wages and profit of the enterprises"[11, p.136].

In S. Dyatlov's opinion, "The human capital is a certain accumulated stock of health, knowledge, habits, abilities, motivations which is formed in the result of investments; this stock is purposefully used in that or other sphere of social production and it fosters the productivity labor increase thus bringing about increase of incomes (earnings) of a given person "[12, p. 83].

One can say, analyzing the aforesaid definitions of the human capital, that the human capital is a totality of a person's individual intellectual potentials in the kind of the non-alienated competencies (knowledge, crafts, skills), it represents an interrelation of all the components of the human capitalwith the strategy which, in its turn, ensures an enlargement of the cost of an enterprise.

Today an absolutely new level of the workers' competence is urgently required, it will allow to remove a gap between the operational activities of enterprises and their strategic guidelines.

A classic in the field of strategic management P. Drucker maintains that today and at least during the next decade the greatest problem facing enterprises will be adaptation to the shift from industrial economy to the economy based on knowledge.

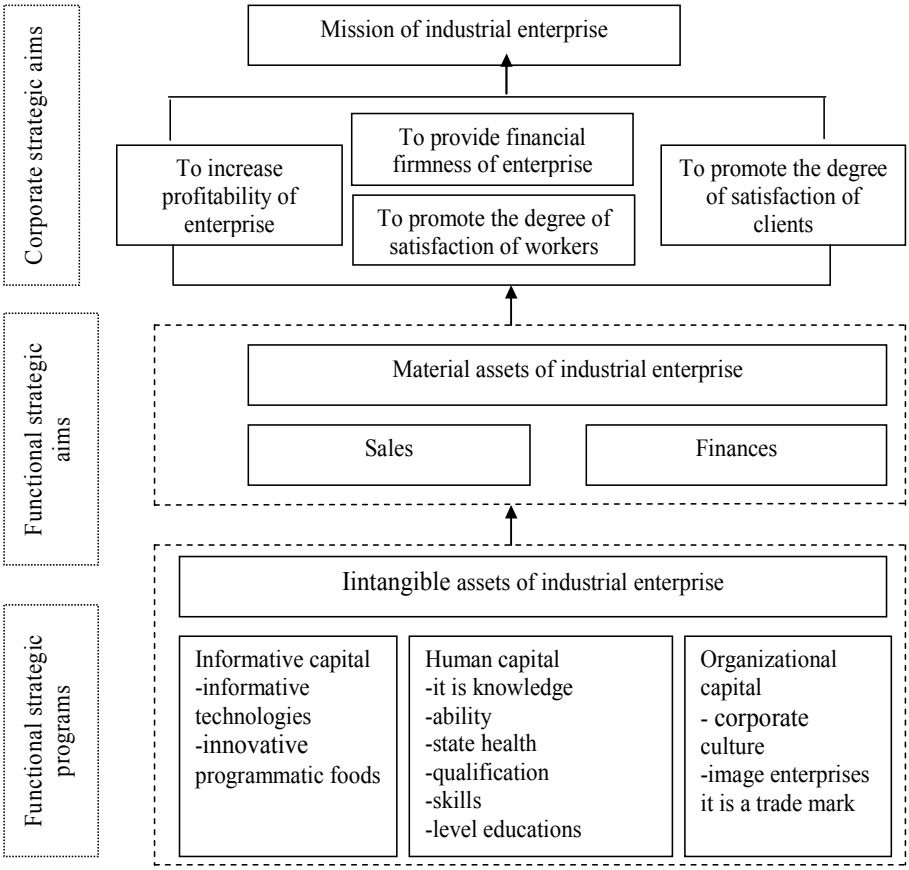

Fig. 1. The process of creating cost from the non-material assets under the innovation development conditions [the authors'creation]

The workers' knowledge as a differential factor touches upon all the aspects of management comprising strategic effectiveness, marketing, organization structure and investments into the human capital. Each of these, directly or indirectly but always essentially, depends on understanding of the people's ability to cope with unforeseen, global and rapid chages.

The human capital as an employer of information technology happens to be a crucial condition for effective management of the enterprise knowledge which creates the cost in keeping with the strategic aims of the enterprise [13, p.143].

To formulate the human capital aims in a proper way it is necessary to have a clear notion about the kinds of competencies which foster the fulfillment of the key internal business processes of the enterprise. The description of the given competencies will allow to form the groups of the most valuable provisions in the process of the strategy realization as well as to estimate all discrepancies between the future needs of the enterprise and existing reality. The removal of these discrepancies is made possible by way of training or by way of hiring co-workers who possess the required skills. Further, on the basis of the human capital aims, particular tasks are ascertained according to which the key indicators of effectiveness will be defined. The key indicators of effectiveness are the quantitatively defined financial and non-financial parameters which show to what extent an effective enterprise reaches the goals set within the framework of the general strategy.

The key indicators of effectiveness are applied both as an instrument of the financial motivation and for assessment of a given worker's performance in comparison with other workers (by the target values of indicators). Their orientation on the strategy allows to concentrate the worker's effort on achieving the strategically important indicators of the enterprise, achieving them will demonstrate the worker's personal contribution into the strategy realization. In Fig. 2, a map of goals and tasks of the human capital under the conditions of an industrial enterprise innovative development is shown.

On the basis of the individually elaborated indicators of the human capital effectiveness as well as the subsequent comparison of the planned and factual data the managers get the information which enables them to make an assessment of the effectiveness of realization of the industrial enterprise corporate strategy.

In our case, these are the indicators of the employee turnover among those workers who undertook training, the general indicators of the workers' satisfaction with the training results, the average score by the final examination etc.

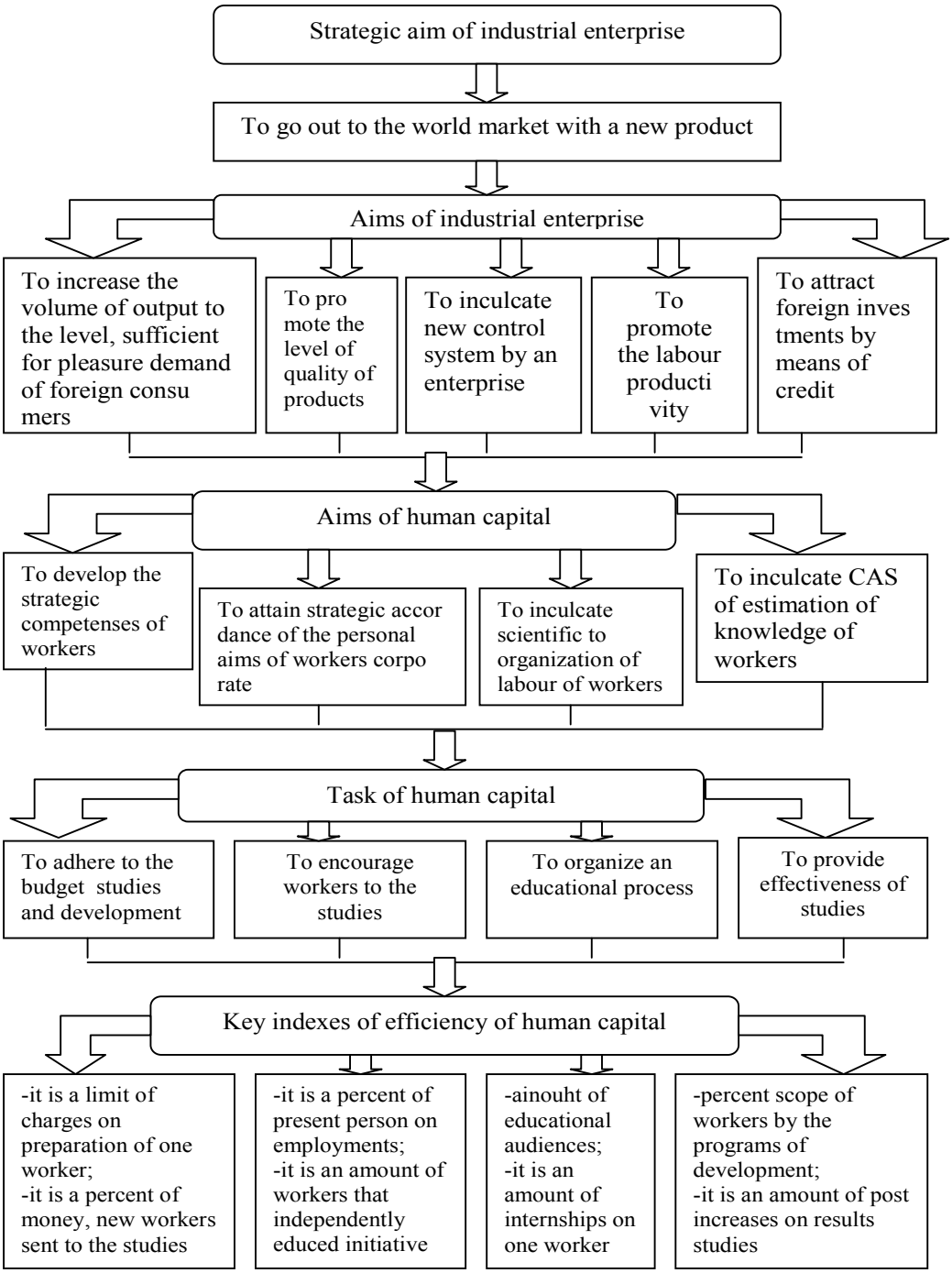

Fig. 2. Map of goals and tasks of the human capital under the conditions of an industrial enterprise innovative development [the authors' creation]

On the basis of the individually elaborated indicators of effectiveness, the human capital solves all these problems by way of taking over control of the key processes, strengthening the feedback (effect of the outer environment on the factors of the enterprise activities) with the help of transposing a vision into strategy, expanding communications and links of the enterprise with the outer environment, carrying out business planning.

It is established that the said operations can be performed by the trained qualified personnel who employ in their practice a creative style and innovative possibilities of the working activity as a form of the human capital functioning.

Conclusions. The analysis of the given research results shows that under the conditions of forming the knowledge economy the enterprise personnel has to be treated as the human capital, whose accumulation allows to increase the competitiveness of enterprises at the expense of making their innovative performance more active. This will enable examining not only the personnel qualification level but also other levels, those which

characterize the innovative activity of such elements of the human capital as abilities, motivations, mobility and health condition.

The methodological approach to regulation of the human capital elements under the innovation development conditions has been improved. To this end, the map of goals of the human capital of an industrial enterprise has been elaborated. For the correct formulation of the human capital goals / aimsit is necessary to have a clear notion about the kinds of competencies which foster the fulfillment of the key internal business processes of the enterprise.The description of the given competencies will allow to form the groups of the most valuable provisions in the process of the strategy realization as well as to estimate all discrepancies between the future needs of the enterprise and existing reality. The removal of these discrepancies is made possible by way of training or by way of hiring co-workers who possess the required skills. Realization of the proposed approach is aimed at increasing the effectiveness of the enterprise's innovative activities by way of the quick-response correcting of the human capital elements in keeping with the corporative strategy of the enterprise.

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Берсуцька С. Я., Каменська О. О. Формалізація людського капіталу промислового підприємства в умовах інноваційного розвитку

У статті на підставі результатів дослідження удосконалено методичний підхід до регулювання елементів людського капіталу в умовах інноваційного розвитку. Для цього сформована карта цілей людського капіталу промислового підприємства. Реалізація запропонованого підходу спрямована на підвищення ефективності інноваційної діяльності підприємства за рахунок оперативного коректування елементів людського капіталу відповідно до корпоративної стратегії підприємства.

Ключові слова: нематеріальні активи, інноваційний розвиток, людський капітал, ключові показники ефективності, корпоративна стратегія, нефінансові параметри.

Берсуцкая С. Я. Каменская О. А. Формализация человеческого капитала промышленного предприятия в условиях инновационного развития

В статье на основании результатов исследования усовершенствован методический подход по регулированию элементов человеческого капитала в условиях инновационного развития. Для этого сформирована карта целей человеческого капитала промышленного предприятия. Реализация предложенного подхода направлена на повышение эффективности инновационной деятельности предприятия за счет оперативного корректирования элементов человеческого капитала согласно корпоративной стратегии предприятия.

Ключевые слова: нематериальные активы, инновационное развитие, человеческий капитал, ключевые показатели эффективности, корпоративная стратегия, нефинансовые параметры.

Bersutska S., Kamenska O. Formalization of an Industrial Enterprise Human Capital under the Innovation Development Conditions

In the article on the basis of research results improved methodological approach to regulate the elements of human capital in terms of innovative development. For the purposes of this form a map of the human capital of an industrial enterprise. Implementing the proposed approach is aimed at improving the efficiency of innovative activity of the enterprise due to operational adjustment elements of the human capital under the corporate strategy of the enterprise.

Keywords: intangible assets, innovative development, human capital, key performance indicators, corporate strategy, non-financial parameters.

Received by the editors: 04.09.2015
and final form 28.12.2015

UDC 331.57+316.42

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THE DEVELOPMENT OF SOFT SKILLS IN THE PROVISION OF COMPETITIVENESS OF GRADUATES

The resolution of the problem. One of the fundamental principles of the market economy is free competition between economic agents for the best conditions and results management. In the labour market there are two areas of competition: between employers for the best labour and between workers for better jobs and wages. In the conditions of existence of unemployment is more intense competition between workers for better conditions of sale of the resource of labour, labour as the ability to perform certain types of work. The most acute competition exists in the segment of young workers without work experience. Thus, according to the state statistics Committee in 2014 the unemployment rate among population aged 15-24 years was the highest among other age groups was 23.1%, compared with the average level in all age groups was 9.3% [1]. Therefore, the problem of ensuring of competitiveness of specialists in the labour market is extremely important.

Analysis of recent researches and publications. The notion of competitiveness of the employee as the subject is examined in the works O. Grishnova, M. Semykina, S. Chur, M. Krymova, N. Glevatskaya etc. O. Grishnova understands the term "competitive employee" the quality of labor market requirements, the ability to win in competition in the labour market, that is better compared to the other candidates to meet the demands of employers by level of knowledge, abilities, skills, personal qualities. Since in modern post-industrial society the quality of the workforce will be predominantly based in education, some study (S. Khazova, L. Slavova, M. Krymova) dedicated to "competitiveness", which is understood as an integrative characteristic, which provides specialist higher professional status, rating position in the relevant sectoral labour market, sustainable high demand for its services [2].

Conducted research (O. Grishnova, S. Shchur, M. Semykina, M. Krymova) come to the conclusion that the competitiveness of a specialist multi – component category which is made up of many demographic, educational qualification, socio-personal, professional qualities [3]. The presence of only a diploma and the received knowledge do not provide competitive specialist in modern conditions. The determining factor of competitiveness of a specialist are of expertise, organically combine the categories "knowledge", "skills" and business and personal qualities needed for a certain type of professional activity.

The aim of the article is substantiation of perspective directions of increase of competitiveness of specialists with higher education by developing their socio-emotional, cognitive abilities (soft skills).

Presentation of the basic material. The concept of "competence" emerged in the real sector in the description of requirements to employees who did not fit into the traditional triad of "knowledge-abilities-skills". In particular, in response to the needs of the business American Management Association commissioned McBer consultant Richard Boyatsisto explore whether a General model of competence Manager displayed the individual competencies of successful managers. As a result of evaluation of more than 2,000 people (41 steering post 12 companies), he gave the definition of "competence" as "the basic characteristics of a person that is causally related to effective work". The competence may include motives, characteristics, skills, perspective of self and social role, as well as knowledge [4]. Similar studies were also conducted by R. W. White, 1959 and David McClelland,1973, T. F. Gilbert, 1978, Spencer Lyle and Signe Spencer.

Thus, the concept of competence combines the successful elements of the definition of a professional: theoretical knowledge, professional skills (hard skills) and personal qualities, attitudes and social skills (soft skills) that contribute to successful or exemplary execution of functional duties. The introduction of the first in scientific and then in the professional handling of HR practitioners and managers of the term "competence" has greatly facilitated the definition of requirements for staff at different levels, and therefore caused a corresponding need to develop competencies in the education system that has traditionally focused on getting the students a wide range of theoretical knowledge and professional skills.

At the present time the problem of formation of necessary competencies of future specialists in the University education system remains quite relevant in Ukraine and in the world. So, according to the report of the British Association of recruiters of graduates (AGR) "according to employers, graduates lack interpersonal skills, such as teamwork. Usually they have deep aca-

demic knowledge but they lack communication skills" (AGR, 2007) [5]. According to the report of the Industrial Council of County Smith (UK) on a survey of employers required workers with skills contain a complete set of soci0emotional soft-skills [6].

A survey of local employers, conducted by the World Bank, confirm the existence of such problems in Ukraine. In 2014 the research STEP four of the key sectors of 4 out of 10 firms reported a significant gap between those skills possessed by their employees and those that firms need to achieve business goals [7].

In the methodological basis of the survey of employers STEP was based on the theoretical and methodological approaches of Almelund and others (2011); Borghans and others (2008); Roberts (2009); OECD (2015), a in which professional skills can be classified into the following groups:

– Cognitive skills — the mental ability or intelligence; these include basic knowledge (e.g., education) and more complex thinking (critical thinking or problem solving).

– Socio-emotional skills – is the behavior, attitudes and personal qualities that help people to effectively navigate the personal and social situations (managing emotions, teamwork).

– Technical skills – the specific knowledge needed to perform a specific job (for example, repair of electronic equipment or the design), as well as psychomotor and manual dexterity.

Most in demand employers is a combination of technical, socioemotional and advanced cognitive skills. According to the survey of firms and data base of vacancies in 2015 in Ukraine there is a significant demand for advanced cognitive skills that enable employees to analyze and solve problems, manage your time, gain new knowledge and to learn new techniques, and to communicate effectively (table 1).

Table 1

Cognitive skills	Socio-emotional skills	Technical skills
Communication skills	Responsibility	Ability to sell
Learning ability	Stress tolerance	Knowledge of markets and products
The organisation of working time	Self-organization	Knowledge of methods of analysis
Analytical skills	Dedication	Knowledge of specialized software
Knowledge of foreign languages	Teamwork	Knowledge of the law
Versatility	Negotiation	Web programming
Critical thinking	Organization	Design
Problem solving	Professionalism	Driving
Decision making	Teamwork	Basic skills of work on the computer

Employers are not just looking for smart workers and those who also possess socioemotional skills that help to manage their emotions and behavior (self-organization, sustainability, ethics), the statement of purpose and the desire to learn (motivation of achievements), as well as the ability to work in a team (teamwork).

Held under the auspices of the World Bank in Ukraine of the study give reason to conclude that socioemotional skills that are in high demand among employers and expand opportunities for employment, often not considered in formal educational or training programs, while they should be part of a comprehensive strategy for the development of professional skills. Individuals with high level socioemotional skills demonstrate the best success in school and at work, and also have good health and other social benefits. Socioemotional skills do not replace the cognitive and technical skills, but they provide an opportunity to learn better, to strive and to achieve successful outcomes in the labour market. By nature socioemotional ability influenced, and therefore they can be developed with appropriate interventions. However, in Ukraine these skills do not develop during schooling and training. Studies prove the necessity of improving the system of education in Ukraine in the inclusion of courses on the development of socioemotional skills into the curriculum [1].

In response to the demands of modern business in Ukraine and to modernize higher education in Ukraine towards integration into the European educational space in the framework of the international EU project "Tempus Impress" ("Improving the efficiency of student services") 2012-2015 four leading universities of Ukraine: Donetsk National University, Ukraine; Taras Shevchenko National University of Kyiv, Ukraine. V.N. Karazin Kharkiv National University, Ukraine; Ivan Franko Lviv National University, Ukraine under coordination of Nortumbria University (UK) has been developed and implemented in the educational process of special training course on "Soft Skills". The uniqueness of the course lies in several aspects:

1) the course is very relevant and in-demand future professionals;

2) the course has a training format that provides maximum practical exercises "flexible" skills, active learning methods, the lack of monologue of teachers, the interest and high motivation for learning and self-improvement students;

3) the course is taught in English, which contributes to the improvement of knowledge of students of a foreign language;

4) students receive as a result of training very useful for employment and further professional success intangible assets: Certificates of TEMPUS, developing a personal development Portfolio, which is filled with the results of tests, assessments, essays, presentations, completed projects.

The course focuses on the development of the most popular social and flexible competencies:

- self-management skills: the ability to take responsibility, to work independently, ability to define your mission in life, to formulate goals, to motivate yourself to achieve it, to manage their own time;

- cognitive skills: reflective and critical thinking and writing, identification of manipulation, persuasion, training and presentations, interaction with the audience;

- communication skills: the ability to actively listen, to provide feedback and respond to criticism, reasoned debate on the rules;

- socio-emotional skills: teamwork skills, peer communication, in particular, equitable learning.

The training course is the result of collective work of a team of authors from four universities participating in the project:

• the module "the Ability to govern themselves", developed by two universities: Kharkiv national University. V. N. Karazin (the sections "Motivation", "Responsibility", the authors – Valentina Pavlenko, Elena Lutsenko) and Donetsk National University (sections "the Ability to set priorities, Ability to manage my time", by Oksana Klimenkova);

• the module "critical thinking" developed by representatives of Kharkiv national University. V. N. Karazin Kharkiv national University;

• modules "Reflective thinking and writing" (author – Oksana Senyk) and the "Academic debate" (author – Roman Kalacak) was developed by representatives of the Lviv national University. I. Franko;

• "Team Work" (author – Ganna Kharlamova) and "equality of communication" (the author – Svitlana Pashchenko) is developed by representatives of the Kyiv national University. T. Shevchenko.

Methodological assistance in developing the course, its objectives, expected results, forms of current and final evaluation, rubrics have provided the project coordinators from the University of Northumbria Alfredo Moscardini, Allison Pickard, and Becky Strachan.

Donetsk National University, despite the known difficulties with the resumption of activities in Vinnitsa, has become an equal participant of the project by developing a course module on time management and the ability to set a goal, and began the work of implementing the course into the learning process. Feature implementation in Donna began preliminary testing of the course in their native language. So the course on "Training social skills" volume 3 TKS credits (90 hours, including 30 hours classroom) was introduced into the curriculum of students of 3-4 courses of the faculty of economic as selective credit discipline from September to December 2015. The course has been chosen by 84 students. Of them in the middle of the semester (after the 6 lessons) interviewed 22 students to assess their impressions of the content and methods of teaching the course, its usefulness and the quality of teaching.

According to the results of the surveys (Fig. 1) the vast majority of students (20 students) appreciated the high quality of the course, its interesting content and structure.

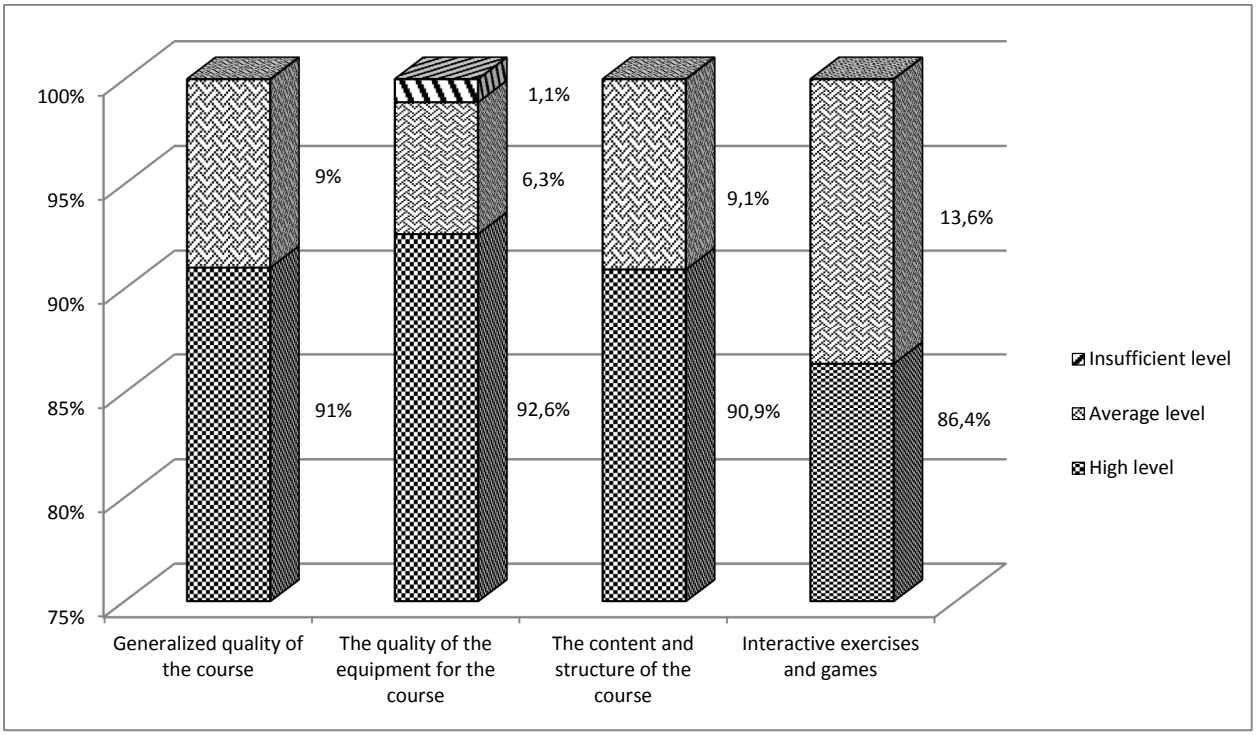

Fig. 1. Student evaluation of the quality of the course "Training for the development of social skills", in Donetsk National University (November 2015)

Already on the results of half of the course, all students noted that the course is interesting, and 100% of the students felt the need to introduce the course into the learning process and encouraged other students to study this course. Of these, 32% of students felt a significant improvement in their knowledge and skills on the subject of the course, and among the most useful topics were noted themes of "Communication in professional activity", "Time management", "Self-management and self-motivation".

Given the feedback from the students, the leadership of Donna economic faculty, with support and funding from the European project IMPRESS TEMPUS equipped one of the classrooms of Economics faculty specifically for English language teaching "Soft Skills" visual AIDS (stands on the main topics of the course) and with modern computer technology. From December 2015. it began classes with English course "Soft Skills" in the framework of the full implementation of the project TEMPUS IMPRESS.

The course enrolled 22 students from different faculties and courses of the University after the announcement of the beginning of a set posted on the information boards of the faculty and social networks. Course "Soft Skills" includes 3 credits: 15 lessons lasting 2 academic hours and is free for students. In the process of studying certain topics, students perform classroom exercises (participate in discussions, brainstorming, group assignments, tests) and home exercises (prepare an essay, develop a map of goals, plans to achieve them, etc), getting on the practice instant grading and feedback from the trainers and from other participants in accordance with the principles of equal education, allowing intensively to develop competence.

Future plans introduction of flexible development (socio-emotional and cognitive) skills in the educational process higher educational INSTITUTION has accreditation of the course at the University of Northumbria (UK) and dissemination of the course in other institutions of higher education of Ukraine.

The conclusions and suggestions. Thus, the main directions of improving the system of training specialists in the direction of enhance their competitiveness in the labour market is:

1) use competence approach to the development of standards for higher education for each educational level and each specialty with the formation of the list of employee competencies as an educational outcome. To develop the list of competencies (competencies) required is to update the content of the national qualifications framework, which takes into account among the personal qualities of the worker as a component of communication competence characteristics, autonomy and responsibility;

2) the introduction of continuous monitoring of the needs of employers in determining the competence of professionals in order to ensure that the content of higher education to the needs of social production and bridge the gap between education and real sector of the economy. Such monitoring is advisable in all specialties annually through a survey of employers and analysis of job vacancies on major portals to find works that provide a representative sample of the urgent needs of economy in labor force in terms of quality. It will also allow to adjust the volume of state order for specialists in professions and specialties and appropriate to direct the state budget on formation of labor potential of the nation, based not on the prestige of professions in society, and the needs of consumers of the quality characteristics of the workforce;

3) reorientation of educational content (educational and vocational programs, work programs of disciplines) on the characteristics of effective learning in terms of competences formed, including not only knowledge and skills but also socio-emotional and cognitive skills necessary for successful performance of professional occupations;

4) the inclusion in curricula of preparation of specialists of the disciplines contributing to the development of cognitive and socio-emotional skills, personal qualities needed by the employers;

5) development of tools for inspecting the degree of formation of cognitive and socio-emotional skills (soft skills).

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Шаульська Л. В., Середа Г. В., Шкурат М. Є. Розвиток Soft Skills в системі забезпечення конкурентоспроможності випускників ВНЗ

Конкуренція на ринку праці є найбільш напруженою в сегменті молоді без досвіду роботи. Роботу присвячено розробці перспективного напрямку підвищення конкурентоспроможності фахівців з вищою освітою – розвитку їх соціо-емоційних, когнітивних здібностей – «soft skills». На основі аналізу сутності поняття «компетенції» авторами обґрунтовано необхідність розвитку в рамках вищої освіти особистісних характеристик (соціо-емоційних та когнітивних навичок) майбутніх випускників у відповідності до потреб ринку праці. Наводиться досвід розробки провідними українськими університетами та впровадження в навчальний процес спеціального тренінгового курсу «Soft skills», який спрямований на розвиток соціо-емоційних та когнітивних здібностей студентів. В статті запропоновані основні тенденції удосконалення системи підготовки фахівців в напрямі підвищення їх конкурентоспроможності на ринку праці: використання компетентісного підходу до розробки стандартів вищої освіти; впровадження постійного моніторингу потреб роботодавців в певних компетенціях фахівців; переорієнтація змісту освіти (освітньо-професійних програм, робочих програм дисциплін) на результативні характеристики навчання в термінах сформованих компетенцій; включення в навчальні плани підготовки фахівців дисциплін, що сприяють розвитку когнітивних та соціо-емоційних вмінь; розробка інструментарію перевірки ступеня сформованості когнітивних та соціо-емоційних вмінь (soft skills).

Ключові слова: компетенції, конкурентоспроможність фахівця, соціо-емоційні вміння, когнітивні вміння, соціальні навички, гнучкі навички.

Шаульская Л. В., Середа А. В., Шкурат М. Е. Развитие Soft Skills в системе обеспечения конкурентоспособности выпускников ВНЗ

Конкуренция на рынке труда является наиболее напряженной в сегменте молодежи без опыта работы. Работа посвящена разработке перспективного направления повышения конкурентоспособности специалистов с высшим образованием – развитию их социо-эмоциональных, когнитивных способностей («soft skills»). На основе анализа сущности понятия «компетенции» авторами обоснована необходимость развития в рамках высшего образования личностных характеристик (социо-эмоциональных и когнитивных навыков) будущих выпускников в соответствии с потребностями рынка труда. Приводится опыт разработки ведущими украинскими университетами и внедрения в учебный процесс специального тренингового курса «Soft skills», который направлен на развитие социо-эмоциональных и когнитивных способностей студентов. В статье предложены основные тенденции совершенствования системы подготовки специалистов в направлении повышения их конкурентоспособности на рынке труда: использование компетентностного подхода к разработке стандартов высшего образования; внедрение постоянного мониторинга потребностей работодателей в определенных компетенциях специалистов; переориентация содержания образования (образовательно-профессиональных программ, рабочих программ дисциплин) на результативные характеристики обучения в терминах сформированных компетенций; включение в учебные планы подготовки специалистов дисциплин, способствующих развитию когнитивных и социо-эмоциональных умений; разработка инструментария проверки степени сформированности когнитивных и социо-эмоциональных умений (soft skills).

Ключевые слова: компетенции, конкурентоспособность специалиста, социо-эмоциональные умения, когнитивные умения, социальные навыки, гибкие навыки.

Shaulska L. V., SeredaG. V., Shkurat M. Y. The Development of Soft Skills in the Provision of Competitiveness of Graduates

The most strong competition in the labor market is in the segment of young people without work experience. The paper is devoted to the development of perspective directions of the enhance the competitiveness of specialists with higher education, developing their socio-emotional, cognitive skills – "soft skills". On the basis of the analysis of the difinitoin "competence" the authors substantiate the necessity of development within higher education personal characteristics (socio-emotional and cognitive skills) of future graduates in line with labour market needs. It provides the experience of leading Ukrainian universities in the creation and introduction in educational process of special training course on "Soft skills" aimed to develop socio-emotional and cognitive abilities of students. In the paper it proposed the main directions of improving the system of training the specialists for the enhance their competitiveness in the labour market: use competence approach to the development of standards for higher education; the introduction of continuous monitoring of the needs of employers in determining the competence of professionals; reorientation of educational content (educational and vocational programs, work programs of disciplines) on the characteristics of effective learning in terms of competences formed; the inclusion in curricula of preparation of specialists of the disciplines contributing to the development of cognitive and socio-emotional skills; development of tools for inspecting the degree of formation of cognitive and socio-emotional skills (soft skills).

Keywords: competence, specialist's competitiveness, socio-emotional skills, cognitive skills, social skills, soft skills.

Received by the editors: 17.11.2015
and final form 28.12.2015

UDC 369.04:316.42+330.322(477)

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THE DEVELOPMENT OF SOCIAL INVESTMENT AND SOCIAL RESPONSIBILITY OF BUSINESS IN UKRAINE

The intensification of globalization processes, requiring the introduction of unified norms and standards of entrepreneurial activity, the limited traditional sources of financing the social sphere, the emergence of a new type of consumer, the choice of which is based not only on qualitative characteristics of the offered goods, but also on the ethical behavior of the company, – all this leads to the formation of new targets for the enterprise that needs to focus not only on market demand for high quality products and services, but also on universal values. In these conditions the special urgency is acquired the distribution and creation of systems of social responsibility of business, as one of the key forms of its strategic development, as well as escalating the need to develop qualitatively new approaches to formation of investment policy of business entities in the social sector, based on internationally agreed principles taking into account the peculiarities of modern Ukrainian society.

Problems of corporate social responsibility of enterprises and effectivesize directions of social investments is quite topical and popular subject not only among domestic and foreign scientists and researchers, but also among the modern management practitioners. Leading researchers in this sphere are among domestic scientists: V. Bocharova, O. Grishnova, V. Kovalev, A. Kolot, E. Libanova, V. Livshits, V. Novikov, A. Sheremet. Among foreign scientists, the most important are: K. Wicksell, E. Domar, E. Class, J. Lindsay, P. Masse, F. Ramsey, G. Solou, D. Stone, J. Tobin, E. Phelps, G. Harrod, and others.

The aim of this work is to study the current state, characteristics and development trends of social investment and social responsibility of Ukrainian enterprises and development of directions for improving the system of their regulation.

In modern conditions of social investment are building blocks for sustainable business development. Solving social problems of the region through social investment, enterprises first of all create conditions for their future, enhance competitiveness of their products, image in society, solvency and the quality of life of the population.

There is a range of studies on the relationship between the volume of social investment of companies and the trends of their development, they are polar. Some scientists and managers of practice think that social investments are a separate kind of expense enterprise, that brings no economic effect for its development and is only a manifestation of corporate social responsibility before state and society. On the other hand, establish a close relationship between the level of development of the company and the introduction of social investment. It is manifested in such indicators as increasing the efficiency of the workforce, the growth of sales and profitability of investment, reduce energy consumption businesses and others.

One of the studies that confirms the vision of the tightness of the relationship of social investment and enterprise development is carried out at the Harvard business school survey of more than 650 companies in the world operating in the sphere of production. The findings are based on analysis of the annual financial statements of enterprises over the past 15 years and of existing social programs, which are implemented by them. Among the objects of the study included not only companies that implement social programs, but also those that do not invest their funds in the social sector. The results of the study show that businesses that implement social programs have the greatest growth in the rate of economic development than those that are less active in social responsibility towards society.Thus, in accordance with the ratio of return on assets $1USD invested in 1995 has allowed investors to gain profit in 2014 to $7.1 USD. Thus $1 USD invested in companies that do not implement social programs brought profit in the amount of 4$ USD [3]. Dynamics of changes in indicators of profitability of own capital shows that socially responsible companies are more efficient, so $1USD invested by these companies in their own projects in 15 years converts to a 25$ USD profit. Changing and gross sales of the relevant social companies, he is 5-10 percent higher than the companies competitors. The greatest impact social investments have on the efficiency of the workforce, which increases productivity, staff loyalty to the company motivation to work (37.9 % excess) [3].

Volumes and directions of social investments of enterprises increasingly depend from the sector in which they carry out their economic activities and the established development strategy. Overall direction of social investments can be roughly distributed among such groups as:

social investment in education, the most common among large industrial enterprises in the USA and Europe that invest in the development of local educational institutions, through total or partial reimbursement of the cost of training, improve the quality of personnel training, providing the bases for practice, funding educational programs students during the holidays, tailor-made support of talented youth, stimulation of development of professional qualities and creative abilities, the educational distribution of rural infrastructure, creation of modern computer and remote training systems etc.

social investment in health is also one of the most common segments of the investing company in the world, its main areas of focus are combating socially

dangerous diseases in the world and disease on a mass scale, medical assistance to the poor population and few developed countries, mostly in Africa and Asia, improve the infrastructure of health services in the country, staffing them with the necessary modern medical equipment, providing customized care to patients with severe disease, and more.

in the development of social potential of an enterprise is to invest in coaching, ensuring adequate income and opportunities for staff development, improving working conditions, providing opportunities of free medical care, recreation and health maintenance, family support staff, implementation of motivation mechanisms to encourage personnel development social support of employees, retirees etc.

in the sphere of maintenance of ecological safety of the country, is the most relevant in today's world and are evenly spread in all countries of the world, lies in the implementation of the environmental technologies installed wastewater treatment facilities at enterprises manufacturing products with the lowest decay rates, the funding of scientific research in the sphere of protection and support environmental protection and so forth.

in the field of improvement of social infrastructure of the city and the region, providing funds to create funds free housing or partial compensation of their cost, to support the development of the network of kindergartens, especially in rural areas, financing of cultural institutions, the establishment of a network of agencies to support people without homes and those that are in difficult positions, generate more jobs, development of cultural institutions and enhancing their availability, the maturity structure of public recreation etc.

the development of the local community, assistance to vulnerable populations, the provision of material assistance to persons in need, promoting healthy lifestyles, social responsibility of individuals, sustainable development, improve the level of social capital, the development of sport and art, the restoration of historical and architectural monuments.

aid to victims of natural disasters, is one of the most common areas of investment abroad, is to offer material assistance to the population in a certain period of time in hard weather conditions which led to the loss of housing, resources, and threatening their lives. This area of investment can be expressed in direct monetary aid and in things, replenishing stocks of food and drinking water.

Ukrainian socially responsible companies in most cases, investing their resources in community development, support to patients, disabled children and children deprived of parental care, support of culture, arts and sports development, especially for children. The world's leading enterprise key the most effective directions of social investments is considered: internal social assets of the enterprise, the education sector of the country, international aid to victims of natural disasters or infectious diseases that is objective, because these components allow you to cover a wider category of investment objects and further makes it possible to provide the highest level of return both in the long and in the short term.

If you compare the volume of social investments of the ukrainian and foreign enterprises they differ. For example, USA companies invest in social projects 3-5% of its net profits, for european companies approximately 2-4% annual return, russian-about 1%, and ukrainian, on average, 0.7 to 1.2%. The total number of domestic and foreign enterprises that are socially responsible are, respectively, 40% and 90% of the total number of business entities [3].

In addition, radically different from the principles of social investments of the ukrainian and foreign enterprises from the standpoint of their output abroad the country in which they reside. Word companies are more internationalized in the process. Almost 40% of social investments they direct to the development of infrastructure and support of the poor of the developed countries or those that need help in a certain time period.

Today's trends in the sphere of social investments in Ukraine are fairly positive, over the past 10 years, spending on social infrastructure development and improving the quality of life of the population increased almost three times, with a fairly spread number of investors and scale of social programs implemented by.

The most socially responsible company of Ukraine is the System Capital Management (SCM), in 2014 invested in the social sphere of the country more than 100 million UAH, that in 2 times more than in 2012, the volume of the declared future of social investment for the period 2015-2016 is over 480 million UAH, the main areas and principles of investing this company is the development of local society, maintaining an appropriate level of life of the population of cities in which are represented the departments of the enterprise. The priority social programs today SCM is the development of education, ensure its high quality and availability, the training of competent and competitive specialists, energy efficiency and utilities sector, development of social infrastructure in towns, support the development of children's and youth football, and many others [4, 5].

The second place among Ukrainian companies in the ranking of socially responsible companies of Ukraine is Kyivstar GSM, costs this company to social programs account for about 20% of total income, the most well-known social projects: "The child safety Online", which includes a whole range of areas, which are embodied at different levels and aims to teach children the rules of online security, facilitating the creation of safe areas on the Internet for communication, learning and development; "For people, for country" - is aimed at supporting orphans and disabled children, in their education, health and creating the most comfortable conditions for their upbringing and development; maintenance of ecological safety of the country, use energy-saving technologies, gardening and landscaping cities of Ukraine and others [2].

The group of companies NIKO takes the third place in the ranking of social responsibility. It differs from other separately created in the framework of the charitable foundation "Krona", the main mission of which is to create a socially oriented society in the country by assisting vulnerable groups of society to achieve

a decent standard of living and equal opportunities for development [1], the main targets of social investment and aid are the children with deficiencies and those that are deprived of parental care (draft "Special children", "My cozy house" and "Big heart little life"). In addition, NICO is implementing certain social programs that are outside the scope of the charitable foundation are: educational program on behavior on the road and promote the observance of traffic rules and cash assistance nationwide children's Hospital center, for the purchase of necessary medical equipment and medicines to children affected by traffic accidents.

Among the above three leaders in the field of social investment, it is possible to mention such ukrainian companies as MTS Ukraine, Obolon, Kraft Foods Ukraine, Group of companies "Foxtrot", Microsoft Ukraine, Ernst&Young Ukraine, Sandora, METRO Cash & Carry Ukraine, Nemiroff holding and others [5].

It should be noted that a sufficiently high recent investments of foreign companies in the social sphere of Ukraine. The main areas of investment in this case most often are: the fight against socially dangerous diseases, the staffing of health care institutions with modern medical equipment, assistance to vulnerable categories of population (children orphans and children with disabilities), support of talented youth etc.

The experience of social investment for enterprises of Ukraine is not new. The beginning of its development is still at soviet times when there was a clear patronage-mechanism of enterprises over educational institutions, healthcare and culture. In addition, the company was responsible for the development and maintenance of an appropriate level of social infrastructure in the surrounding areas, providing recreation and educational development workers and members of their families. A negative feature of this stage of development was the orientation of enterprises to the needs of the state and not increase the possibilities of obtaining the company a certain return on these investments. With the adoption by Ukraine of the status of independence of social investing, as a separate element of costs has almost disappeared and resumed its existence only in the early 2000s. For the first time in most cases it was incidental and spontaneous in nature and there was no certain software in their implementation and their scale covered only a narrow circle of persons. Today, social programs are a separate segment of the development strategy of most companies, especially those that develop in accordance with the requirements of sustainable development, they are cyclical, gradual, covering a wide range of people and is constructed in such a way as to provide some return on investment in the short or long term. However, despite the relatively positive trends, there are a number of problems hindering the social activity of companies and, in turn, support the social infrastructure of the country is:

insufficient awareness of society about the social activity of ukrainian companies, the volumes and directions of social investments, covering the essence of existing and future social programs of enterprises, their influence well the development of social infrastructure and communities;

rather narrow field of social investment, social programs of ukrainian enterprises in most cases is aimed at supporting vulnerable segments of the population, with little focus on strategic areas of social development, education, health, the formation of social responsibility in young people, the education of future generations, the social infrastructure of the country;

small and medium enterprises are the main actors in the implementation of social investment, social programs are being implemented the largest domestic companies or companies with transnational business in Ukraine;

the lack of a clear understanding of the management of enterprises on the clear relationship between the volumes of social investment and future economic revenues;

the lack of a clear national model of corporate social responsibility in Ukraine, which makes it impossible to build a clear mechanism for strategic action of the enterprise in the social sphere according to modern Ukrainian realities;

low level of responsibility of the enterprises for the provision of comprehensive, reliable and relevant information on their financial statements and taxes;

the lack of clear legislation in the field of social responsibility and the regulation of social investment, the lack of a flexible mechanism for providing benefits to businesses that implement social programs and build a socially responsible business;

the lack of uniform national standards in the field of infrastructure development social investment;

low attractiveness of segments of the social infrastructure of the country for investments, high level of corruption and toning of the economy.

Comparative analysis of the development of social investment abroad and in Ukraine, examines the trends, status and problems in the development of social responsibility and social investments of national business revealed the following perspectives and resources to increase their scope and breadth. Among them are the following:

the construction of incentive mechanism of media, a relatively constant illumination of issues of social responsibility of business and the development of social investment in the country;

creating a legislative base aimed at stimulating entrepreneurs to increase the level of investment revenues to the social sphere of the country. In this case, an example would be the existing USA experience in this area. In accordance with the legislative acts, the enterprises are entitled to tax benefits in the amount of 10% if they are regular investors in the social environment of the country and take part in solving critical social problems of the country;

creation on the basis of large companies of such funds, to empower the participation of small and medium-sized enterprises in large social projects. Alternatively, it is possible to combine resources of medium and small enterprises, to implement certain priority social programs;

the development of corporate volunteering staff, is a common mechanism in foreign countries, implementation of this direction is developing of local society, increases the company's image as a socially responsible business, strengthens corporate culture that supports staff development, reducing the direct financial costs of enterprises in social investment. The implementation of this approach involves encouraging staff to get involved in social volunteer programs, for example, participation in charity, visiting orphanages and nursing homes, attending charity shows and concerts, conducting lectures in schools, assistance to young professionals in acquiring the necessary skills;

assistance to development in Ukraine "banks of time", the essence of which consists in the generation and accounting of time that an individual spends on providing them with volunteer help, 1 hours equal to one credit. If in your lifetime there are situations when the investor will require help, he can ask to "bank of time" and receive help from another person in the amount of credits he amassed during their volunteer activities. This method is widely used in developed foreign countries and declared itself as quite effective;

encouraging companies to use charitable nonprofit organizations as a separate generating facility of the total volume of social investing allows you to accumulate and spend funds purposefully allocated for the social support of the community;

increase transparency of charity foundations and social costs of the enterprise, allows to increase the degree of trust funds and advocate of socially responsible business in the country.

Certain the study areas will have certain social and economic effect, which is manifested in the increase in the degree of confidence of enterprises social investment would increase the level of their impact, will help to develop social infrastructure and improve the overall quality of life of the population of Ukraine.

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Пархоменко Ю. М. Розвиток системи соціального інвестування та соціальної відповідальності бізнесу в Україні

В статті розглянуто сутність та роль соціального інвестування в загальній стратегії бізнесу. Проведено порівняльний аналіз обсягів та масштабів інвестиційних вкладень закордонних та вітчизняних компаній в соціальну сферу. Розглянуто особливості побудови політики соціальної відповідальності провідних українських компаній. Визначено ключові проблеми, що стримують в Україні розвиток соціально відповідального бізнесу. Виокремлено резерви та перспективи збільшення обсягів та масштабності соціальних інвестицій.

Ключові слова: соціальні інвестиції, соціальна відповідальність, ефективність, віддача від інвестицій, соціальна сфера.

Пархоменко Ю. Н. Развитие системы социального инвестирования и социальной ответственности бизнеса в Украине

В статье рассмотрена сущность и роль социального инвестирования в общей стратегии бизнеса. Проведена сравнительная характеристика объемов и масштабов инвестиционных вложений зарубежных и отечественных компаний в социальную сферу. Рассмотрены особенности построения политики социальной ответственности украинских компаний. Установлены ключевые проблемы, сдерживающие в Украине развитие социально ответственного бизнеса. Определены резервы и перспективы увеличения объемов и масштабности социального инвестирования.

Ключевые слова: социальные инвестиции, социальная ответственность, эффективность, отдача от инвестиций, социальная сфера.

Parkhomenko Yu. M. The Development of Social Investment and Responsibility of Business in Ukraine

The article considers the nature and role of social investment in the overall business strategy. The comparative characteristic of the volume and scale of investments by foreign and domestic companies in the social sphere. The features of the construction of the social responsibility policy of the Ukrainian companies. Established the key problems hindering the development of Ukraine in a socially responsible business. Identified reserves and prospects for increasing the volume and scope of social investment.

Keywords: social investments, social responsibility, efficiency, return on investment, social sphere.

Received by the editors: 26.11.2015
and final form 28.12.2015

UDC 331.1:377

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THE FORMATION OF THE KEY ASSETS OF HUMAN CAPITAL AT THE CORPORATE LEVEL

Statement of the problem. Socio-economic transformations in Ukraine, could not affect the sphere of formation and use of human capital assets at the corporate level. Modern production requirements are accompanied by the emergence and spread of new corporate values and competencies and a new attitude to training of personnel.

Developing in line with global trends, ukrainian industrial enterprises try to create all necessary conditions for the effective reproduction of human capital, facilitating the transition to the innovation stage of development of the enterprise. All this implies the need to achieve not only high levels of development of personal and professional qualities of the staff, but their professional abilities to the reasonable introduction of innovations in production, forecasting and planning of its activities with a focus on trends in technology and production.

Analysis of recent researches and publications. The study challenges the training and development of staff within the formation and reproduction of human capital are widely considered in the scientific works of leading domestic scientists A. Amosha, V. Antonyuk, S. Bandur, L. Beztelesnaya [1], N. Boretskaya, D. Boginya, S. Kalinina, A. Kolot, G. Nazarova, V. Nikiforenko, O. Novikova [2], T. Petrova [3], V. Savchenko[4], L. Shaulskaya [5], etc. Despite the high level of research shows the problem, the formation of the key assets of human capital at the corporate level are not yet enough investigated domestic economic science. Accordingly, the change of approaches to the formation of human capital assets in the enterprise requires new, effective methods and forms of staff training that causes the relevance of this study.

The aim of the article is research of features of formation of human capital assets at an enterprise level and development of recommendations on improvement of the development system and professional development of staff.

Presentation of the basic material. Successful implementation of strategic objectives and short-term plans of the company, balanced development of social and labor relations in the conditions of instability of external environment is largely dependent upon the effectiveness of staff management and rational use of labor potential.

Currently one of the modern tools of personnel management for the HR Manager and the head of the company is the evaluation of staff based on the competency model. The use of this HR-instrument as the model of competences will give the company a more efficient way to manage the following processes: achievement of strategic goals; selection of personnel; evaluation of personnel; development of corporate culture; employee training; employee development; work with the personnel reserve.

A competency model may include a variety of knowledge, abilities, skills and personal characteristics. The main requirement that is presented to them, they should be described in the form of indicators of behavior. All competences are described through behavioral indicators.

Competencies can be used as a tool for evaluation or selection of candidates, and you can become a "core" around which will be built the entire system of personnel management. It is important that the project to develop a competency model was supported by line managers and top managers. Without their participation, only by service personnel, the project very difficult to implement.

The model of competences will allow to define and estimate precisely the qualities that are important for the enterprise to achieve its goals and objectives, but also facilitate the process of integration of competences in the system of development of employees, facilitating achievement of business goals.

The use of a competency model will enable employees to clearly understand which qualities and skills depends on their promotion. If the decision on promotion is based on clear criteria, the staff perceive it as more fair. It is very important to align corporate values with core competencies.

As a basis for building a competency model is proposed to use the value system of the enterprise, including: leadership, professionalism, customer focus, reliability and teamwork. For each of the above values it is necessary to formulate the appropriate competencies for staff.

A competency model is a kind of manual step-by-step repetition of the mission and strategic goals and objectives of the enterprise, with a clear understanding of the place and importance of every employee in the process of building an effective business.

Leaning and relying on longtime experience of using competency model to assess and personnel management by companies such as Microsoft, Procter&Gamble, Coca-cola, DTEK, LLC "Metinvest Holding", which took place the process of introduction, adaptation and improvement competency model, it is possible to form a model of core competencies for the company (table 1).

Using a competency model, the company will be able to: clearly define standards and expectations to em-

ployees; lead the activities of individuals, groups and managers in accordance with the organization's strategy; create plans of development for themselves and subordinates; to increase the level of responsibility and competence of managers, evaluate activities of employees, and the employees themselves, but also to raise the level of competence of the whole enterprise.

Table 1

Model of key enterprise competencies

The values of the company	Competence
Leadership	the ability to take responsibility for decisions
	the ability to set goals and achieve them
	continuous improvement of processes
Professionalism	effective management of resources
	focus on your own development
Customer focus	the customer satisfaction
	focus on quality execution of work
Reliability	strict quality control
	stability in the following order
Teamwork	the formation of a trusting relationship
	focus on the team achieving a common goal

The difficulties that may arise at the enterprise when implementing competencies: a rejection by the staff of any change of control, rejection and fear of the new; the reluctance to be assessed; errors in the definition of competencies, as a consequence of not following the correct order of the company; lengthy and complex descriptions of competences make it difficult to understand their employees.

The risks facing the company: description of core competencies for the enterprise is strictly confidential, because competitors on the basis of the competence model can get a detailed picture of the life and activities of the company, its strengths and weaknesses, business priorities and business strategies; lack of compliance with the objectives of the company have developed competencies and personal objectives of each employee within the company. It is important to achieve harmony and unity of purpose.

For more effective personnel management it is necessary to expand the duties of the special (professional) competence, as they allow to evaluate behavioral characteristics of each employee.

A competency model is the basis for the training and development of employees. It helps to determine what skills are required by employees at their positions and what you need to train your employees.

It is therefore appropriate to develop and implement industrial enterprise development system and the professional development of staff which will identify and justify the methodological guidance of the process of formation and development personnel and which meets the following criteria:

saving and transfer of knowledge (development of training programs will involve knowledge of all the best experts of the enterprise);

the universality (the system will be replicated to all enterprises);

the prompt response to existing gaps (response will occur through the assessment of performance indicators. The programs will be developed in a problem, resulting in reduced production efficiency);

the development of engineering capability (will lay professional knowledge – the basis for the solution of engineering problems in the development of technology);

the measurability and transparency (will be based on a qualitative assessment before and after training).

The proposed name of the system – "School of Professional", a feature of which is saving and transmission of knowledge by internal experts (training and mentoring). School of Professional complements existing systems, which also give contribution to the development of professionalism.

Also assume the creation of a "School of excellence" to share best practices and development Programs of Personnel reserve, which will allow to develop professional knowledge through project activities (development of technologies / equipment).

The basis for the School of Professional founded the universal cycle, which consists of five steps (Fig. 1). The detail and the used instruments can be modified depending on the specifics of production and enterprise.

Step 1. Defining the target audience for training. The Organization of the Schools. The objective is to identify staff who need training; to organize the School of Professional share the responsibility in the Schools (Fig. 2).

Step 2. Diagnosis. The challenge is to identify the skills gaps and shortcomings of existing regulations, instructions, standards.

Step 3. The preparation and planning. The goal is to improve the quality of regulations, instructions and development of training programs.

Stage 4. Implementation, namely, to train staff and to fix knowledge in practice through mentoring.

Step 5. Assessment. The replication of experience. The goal in this step is evaluation of obtained knowledge, improve performance, replication of the training program for related businesses.

School of Professional is being implemented through a disciplinary approach. Leaders of disciplines are considered the main experts of the enterprise. The proposed procedure for the determination of workshops for staff training:

1. Disciplines leaders prepare their proposals for the shops, urgently requiring advanced training.

2. Review and approval of proposals of Leaders of the Discipline at the level of functional directors (production, engineering, technology). Department heads will announce their assessment of the level of qualification of personnel of their departments.

3. Coordination of Schools of Professional and workshops with the director of the company.

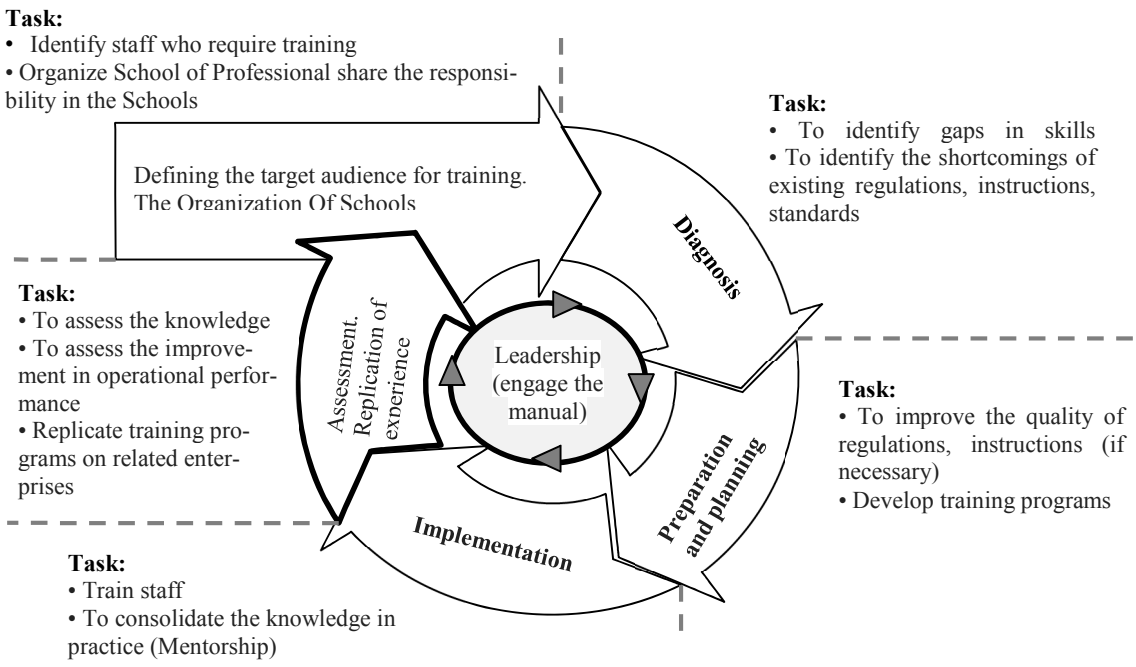

Fig. 1. Levels of functioning School of Professional

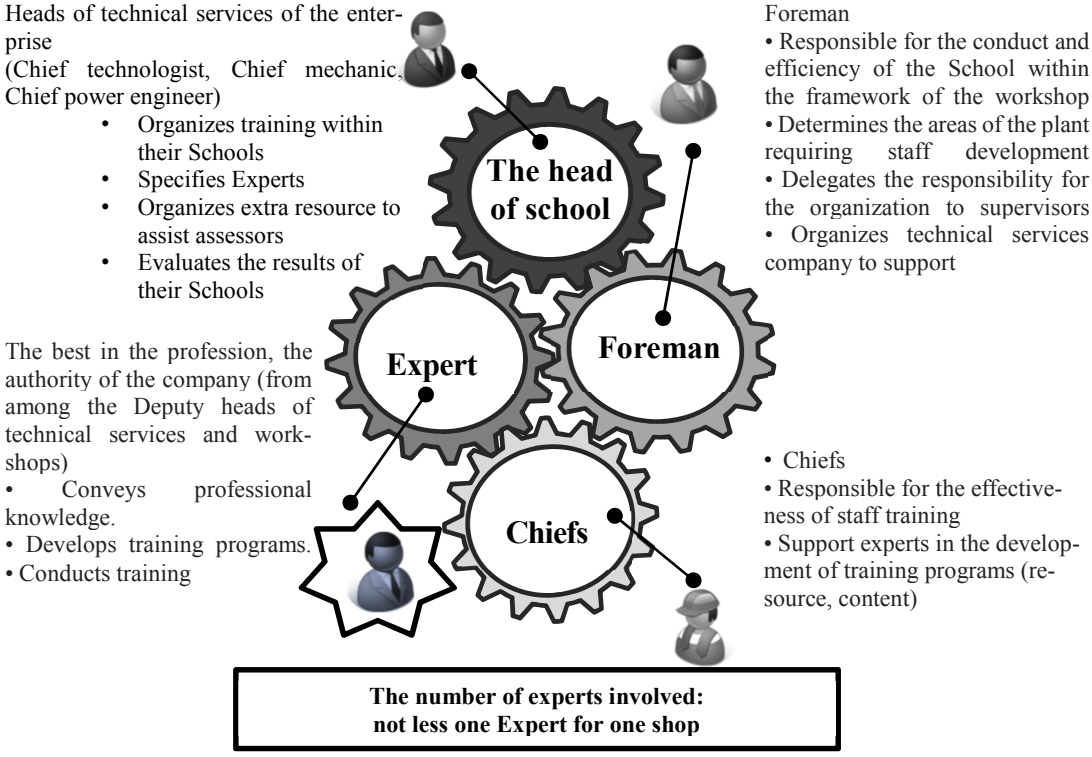

Fig. 2. The distribution of roles in the School of professional

Speaking about the improvement of the system of education, training and skills development at the enterprise it should be noted that currently, the nature and role of HR management is influenced primarily by the following factors (Fig.3):

1) radically changed the systems and functions of personnel management and business relationships with each other;

2) virtually disappeared many coordinating educational centers, helped the company to work with staff;

3) the lack of a common methodological base has stumped most of the businesses operating the old-fashioned way;

4) most of the problems in the sphere of work with personnel has not just changed, but it got sometimes the

opposite orientation (the problem of shortage of personnel has changed its release, excessive employee turnover excessive stability, a very acute problem of rejuvenation of personnel, etc.); in such circumstances, the earlier accumulated experience were almost unacceptable;

5) new business environment and management came into conflict with the inertia of the mentality, the psychology of dependent and passive employee. In such circumstances should radically change the attitude of the leadership of the enterprise to personnel services and staff training in particular.

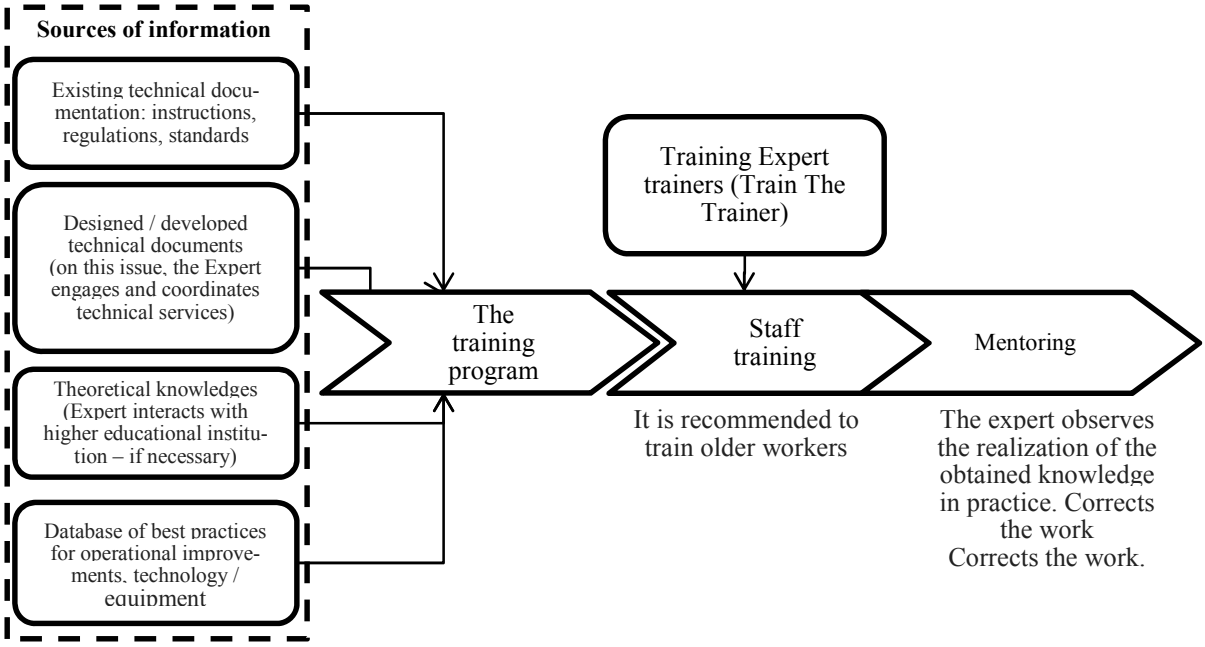

Fig. 3. Development of programs and training

A strategic objective under the new economic conditions must be move beyond accounting and control functions of the system of training and skills development to analytical. It is necessary to assume personal responsibility for the level of qualification of the subordinate employees on the master and foreman.

It is also necessary to link the level of tuition freelance teachers of theoretical training not only the number of classes, and with their level of attendance workers in the shops.

In the prevailing conditions required a stricter approach to the award of high and highest qualification level at the end of the production-technical courses (especially for maintenance personnel). To this end, in our opinion, it is necessary:

1) to develop and approve the list of test qualification works;

2) to create a commissions for certification of workers qualification at level 6 and above with the inclusion of specialists of the chief engineer, department chief engineer, technical control, technical division and the central laboratory;

3) to implement in the practice of awarding the highest qualification level only after passing the examination employees of the commission;

4) in order to maintenance personnel when assigned the highest qualifying discharges to provide a passing test qualification is not in the shops and at the training and production area under the supervision of an instructor or master teachers.

The conclusions and suggestions. In modern conditions formation and use of human capital assets at the corporate level has some drawbacks and needs improvement. Development and implementation in industrial enterprises the proposed model of core competencies will clearly identify standards and expectations for staff to lead the activities of individuals, groups and managers in line with the strategy of the organization. The creation of the proposed system development and improving professional staff development will give the opportunity to identify and justify the methodological guidance of the process of formation and development of the frames, to compare the size of the budget with identified needs, set priorities in vocational training. From the implementation of the proposed measures to improve the structure of personnel potential, the development of vocational training of workers of industrial enterprises will receive not only the economic effect, expressed in increasing the productivity, profitability of production activities, but also social, which is realized in the form of increased employee satisfaction with various aspects of employment, improving the socio-psychological climate in the team, improving corporate culture.

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Бойченко В. С. Формування ключових активів людського капіталу на корпоративному рівні

Стаття присвячена дослідженню особливостей формування ключових активів людського капіталу на корпоративному рівні і розробці рекомендацій щодо вдосконалення системи розвитку і підвищення професійної кваліфікації персоналу. В ході дослідження обґрунтовано, що на сучасному етапі одним із сучасних важелів управління персоналом є оцінка персоналу на основі моделі компетенцій, використання якої дасть підприємству можливість більш ефективного управління такими процесами: досягнення стратегічних цілей; підбір персоналу; оцінка персоналу; розвиток корпоративної культури; навчання співробітників; розвиток співробітників; робота з кадровим резервом. Встановлено, що розробка і впровадження на промислових підприємствах запропонованої моделі ключових компетенцій та системи розвитку і підвищення професійної кваліфікації персоналу дозволить виявити і обґрунтувати методологічні орієнтири процесу становлення і розвитку кадрів, зіставляти розмір бюджету з виявленими потребами, встановлювати пріоритети в професійному навчанні, що сприятиме підвищенню продуктивності праці, зростанню задоволеності персоналу різними аспектами трудової діяльності, підвищенню корпоративної культури.

Ключові слова: людський капітал, активи людського капіталу, управління людськими ресурсами, персонал, модель ключових компетенцій, корпоративні цінності, навчання, розвиток і підвищення професійної кваліфікації, школа професіонала.

Бойченко В. С. Формирование ключевых активов человеческого капитала на корпоративном уровне

Статья посвящена исследованию особенностей формирования ключевых активов человеческого капитала на корпоративном уровне и разработке рекомендаций по совершенствованию системы развития и повышения профессиональной квалификации персонала. В ходе исследования обосновано, что на современном этапе одним из современных рычагов управления персоналом является оценка персонала на основе модели компетенций, использование которой даст предприятию возможность более эффективного управления следующими процессами: достижение стратегических целей; подбор персонала; оценка персонала; развитие корпоративной культуры; обучение сотрудников; развитие сотрудников; работа с кадровым резервом. Установлено, что разработка и внедрение на промышленных предприятиях предложенной модели ключевых компетенций и системы развития и повышения профессиональной квалификации персонала позволит выявить и обосновать методологические ориентиры процесса становления и развития кадров, сопоставлять размер бюджета с выявленными потребностями, устанавливать приоритеты в профессиональном обучении, что будет способствовать повышению производительности труда, росту удовлетворенности персонала различными аспектами трудовой деятельности, повышению корпоративной культуры.

Ключевые слова: человеческий капитал, активы человеческого капитала, управление человеческими ресурсами, персонал, модель ключевых компетенций, корпоративные ценности, обучение, развитие и повышение профессиональной квалификации, школа профессионала.

Boychenko V. The Formation of the Key Assets of Human Capital at the Corporate Level

The article is devoted to research of features of formation of key assets human capital at the corporate level and developing recommendations to improve the system development and professional development of staff. In the study proved that at the present stage one of the modern tools of personnel management is the evaluation of personnel based on the competency model, which will give the company a more efficient way to manage the following processes: achievement of strategic goals; selection of personnel; evaluation of personnel; the development of corporate culture; employee training; employee development; work with the personnel reserve. It is established that the development and implementation in industrial enterprises the proposed model of core competencies and development system and professional development staff will identify and justify the methodological guidance of the process of formation and development of the frames, to compare the size of the budget with identified needs, to establish priorities for professional learning that will enhance productivity, increase employee satisfaction with various aspects of the employment environment, enhance corporate culture.

Keywords: human capital, assets, human capital, human resource management, personnel, model of core competencies, corporate values, training, development and professional development, school of professional.

Received by the editors: 30.11.2015
and final form 28.12.2015

UDC 331.54:332.13

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FEATURES OF FORMATION AND DEVELOPMENT OF THE YOUTH SEGMENT OF THE REGIONAL LABOUR MARKET

Statement of the problem. In recent years, the Ukrainian labor market is in a state of transformation, which is accompanied by some negative consequences, in particular associated with declining productivity, deteriorating employment conditions, the distribution segment of non-standard employment and so on. Particularly acute in the labor market raises the question of youth employment, which has specific features and feels certain barriers to enter the market specified. In modern conditions of economy development there are many challenges in youth employment, namely the imbalance of supply and demand in the labor market due to the lack of informed state order for staff training; the reluctance of employers to hire young specialists; the unsatisfactory level of realization of the state youth policy. Youth unemployment is an urgent social problem and requires the development of effective measures to deal with it.

Analysis of recent researches and publications. A significant contribution to domestic economic research of the labor market and youth employment made by S. Bandur, D. Bogynya, L. Beztelesna [1], V. Vasilchenko, S. Vovkanych, O. Grishnova, M. Dolishniy, T. Zayacz', S. Zlupko, L. Ilyich [2], A. Kolot, M. Krymova [3], E. Libanova, L. Lisogor [4], G. Nazarova, V. Onikienko, V. Onishchenko, I. Petrova, V. Petyuh, N. Titova, U. Sadova, L. Semiv, O. Homra, M. Shalenko, V. Shamota, L. Shaulska [5], L. Shevchenko, N. Yakimova [6] and others. However, the problem of research of features of formation and development of the youth segment of the regional labor market remains relevant and needed revision of existing and development of new measures to tackle the issue of youth employment, which should become the basis of providing professional and qualification balance on the labor market.

The aim of the article is research of features of formation and development of the youth segment of the regional labor market, assessment of the status of youth employment in the Donetsk region, identification of problems of youth employment in terms of socio-economic imbalance and the development of measures to tackle the problem of youth employment.

The presentation of basic research materials. Today, youth employment is one of the most urgent socio-economic problems of the ukrainian society. It is young people account for almost 40% of global unemployment. According to statistics of the European Union, unemployment among young people is 2.4 times higher than among adult population groups. Experts say that the earlier a youth enters the labor market, the higher the instability of her employment, high turnover, which leads to direct moral and material losses both for youth and for society as a whole. On the one hand, the youth has a fairly large and significant advantages compared with other age categories of the working-age population: a longer uptime, better health status, high level of education and mobility. On the other hand, young people lack relevant experience, to feel competitive in today's job market.

Youth integration into the labor market occurs mainly after graduation. In conditions of considerable excess labor supply over demand into effect the laws of market competition: the employer has the choice of labor market those who meet his exact requirements regarding qualification, work experience. Young people do not always these criteria is able to compete in the labor market for the existing vacancies. And this is the cause of complications in future employment, reduction of labor force quality and productivity of public production. As a result, unemployed youth decreases motivation for socially useful work.

Thus, the determinants of the development of the youth segment of the labor market due to certain features of the social situation and the employment behavior of young people: a qualitative and quantitative imbalance of supply and demand of labor force; high educational level; low adaptability to economic and social environment; higher requirements for employment (prestige, income), the content, nature and conditions of work; high professional and territorial mobility, due to the weakness of economic and social relations of the young man. And in this context, the study of the problems of youth unemployment, the search for ways of its decision are extremely important and relevant.

With the aim of studying the peculiarities of formation and development of the youth segment in the regional market of labor analyze the labor market of Donetsk region.

Today the situation on the labor market of Donetsk region is quite tense and is characterized by negative trends that are associated with the lack of a sufficient number of quality jobs, narrowing the scope of application of labor, the growing strain on local labor markets due to increased internal migration of the population.

According to the latest data of household survey on methodology of the International labor organization (ILO) on average for 9 months 2015 the number of employed people in the Donetsk region, in comparison with the similar period of 2014 decreased by 58.1% and amounted to 760,7 thousand persons. The employment rate of the population in the Donetsk region decreased

from 56,1% to 50.6%. The unemployed population aged 15-70 years on average for 9 months of 2015, compared with the same period of 2014, in the Donetsk region decreased by 41.9 % and totaled 119.5 thousand persons. The unemployment rate in Donetsk region of economically active population grew by 3.4%, from 10.2% to 13.6%. The ukrainian average level of unemployment for 9 months of 2015 is 9.0% [7].

The volume of production declined on average by half compared with last year: total – almost 4 times – in the chemical industry; 3 times – in the food industry; 2.5 times – in an easy and extractive industries; almost doubled in mechanical engineering and metallurgy. Reduces the demand for workers in almost all economic activities. There is a narrowing of the scope of application of labor. The number of vacancies which the employers have informed the employment centers, as of January 1, 2016 amounted to 355 units and compared with the corresponding period last year, dropped three times (on 1 January 2015 – 1.1 thousand). There is a growing imbalance between demand and supply of labor. As of 1 January 2016 for the vacant working place claimed 60 unemployed (on 1 January 2015 – 25 people) [8].

Unemployment defined by the ILO, among young people aged 25-29 for the first 9 months of 2015 was 10.8%. Among those aged 15-24, this index was 21.8% and was twice higher than the figure among all age groups. High unemployment due to the fact that many young people lack the relevant professional skills and experience.

In conditions of radical changes in the labor market the most affected is the youth. The total number of youth up to 35 years, which was registered with the employment service of Donetsk region in 2015 was 31.5 thousand people, which is 36% less than in 2014. But it accounted for 43.8% of the total number of people who were given the status of unemployed, that is, almost every second [8].

As of 01.01.2016 the number of registered unemployed with the employment service of the region was 21.2 thousand people, of which 39,8% - young people under 35 years. More than 60% of youth registered with the employment service are women. In the professional section 46% of young people under 35 years old held jobs, 43% were office employees and 11% of places that don't require special training.

It should be noted that the educational level the greater the number of unemployed who were registered in the course of 2015, had higher education levels (50% - basic higher, incomplete higher and complete higher), 35% had vocational training, 11% overall, 4% of basic general secondary and elementary.

Ratio analysis of the professional composition of the persons to the needs of employers, indicates structural heterogeneity of the regional labour market. The biggest difference between supply and demand is noted in the following occupational groups: 4.1 times supply exceeds demand employers of legislators, state employees, leaders, managers (managers); 3 times – technical employees; more than in 2 times – in the professionals, specialists, elementary occupations, skilled workers with tools, the workers in the sphere of trade and services [7].

For 2015 registered in Donetsk regional employment center there were almost 2 thousand graduates. Almost every second (i.e., 72% of the total number of graduates) graduates of higher educational institutions (HEI), one in four (i.e. 25%) – graduate vocational education institutions (VEI) and 3% were graduates of secondary schools (SS) [8].

Modern realities, unfortunately, prove that the education system and the needs of the labor market are two parallels, which, it seems, will cross soon. The government spends considerable funds for training in high school for so-called "prestigious" professions (lawyer, economist, accountant, manager, etc) and at the same time, considerable costs are used to pay allowances to graduates already unemployed.

Since 2012, Donetsk regional employment center embedded sociological surveys of young people (using questionnaires and short-term monitoring) with the purpose of building feedback with young people of the region regarding their needs. Main areas of research relate to: the needs of young people related to the field of professional self-determination; identify the level of professional self-determination of students; self-assessment of youth situation in the labor market; life position of youth and the level of readiness to change; level of development of the technical skills of job search and self-presentation to the employer.

In Donetsk region the survey was carried out 10096 people aged 15 to 35 years. Analysis of survey results enables to draw the following conclusions: (2014-2015) [8]:

1. Peculiarities of self-assessment by young people of their situation in the labor market: 87% of the respondents though not satisfied with the current state of their unemployment, but continue to occupy a passive position and, in most cases, not planning any specific steps of changing the situation. Position in life – passivity and the waiting for suitable vacancies.

2. Job searching methods. About half of respondents (50%) when looking for work appealed to a narrow range of sources of information about job openings (people close, directly to the enterprises and ads on the Internet). Almost 65% of unemployed youth there is no resume.

3. The choice of a profession. This trend has been analyzed in 2012-2013. In the latter studies was collected information, which generally corresponds to the preliminary data and echoes the results of the survey "Youth of Ukraine-2015" commissioned by the Ministry of youth and sports of Ukraine Young people remain

the trend for choosing professions "white collar" than workers. When choosing your specialty, only half of youth representatives of the region focus on the specialty that fit the interests, hobbies, abilities. 30% focus on specialties that can provide a decent income.

4. The main principles in choosing a school: the high level of teaching – this was indicated by 25% of respondents, convenient location – 24%, the ability to get education for free – 21%.

Among the main motives is the desire to improve education: a personal need for a higher level of education – 53%, possibility to apply for a more prestigious job – 53%, the possibility of higher earnings – 50%.

5. The selection criteria of vacant positions youth. The most important aspect in young people have got a good pay – so says 87% of the employed respondents, only 35% said interest in the work, and 24% – the ability to achieve something.

6. Active provision of employment through opening their own business. Answering the question, would they have to become entrepreneurs, to start their own business, more than one third of the number of young people noted that they would like, but they are hindered by various circumstances (35%). The majority of respondents obstacle to their own business consider a difficult economic and political situation, the lack of initial capital and high taxes.

Sociological studies show that the main causes of youth unemployment are: insufficient information about the requirements set by employers for professional and personal qualities of the future employee; a wrong choice of profession.

Acquired a graduate profession is often such that there is no demand in the labour market. Thus, the survey of students of psychological and pedagogical specialties have shown that they intend to work in their chosen profession for 77.3% of the surveyed students of the first course; 17.3% are still undecided; and only 4.0% have no such intention. But among students of the fourth year only 50% are willing to work in your chosen profession. A higher percentage of fourth-year students (nearly half of first-year students) who are still undecided – 37,9%; and 12.1% of respondents do not intend to work in their chosen profession.

The survey of employers showed that only 21.1% of them in employment provide benefits to employees aged 18 to 25 years. A significant proportion of employers (62,7%) prefer to have employees aged 26 to 30 years. At that 72,8% of employers are choosing employee with experience in the specialty. Graduates of HEI and VEI provide the advantages of only 17.4% of employers).

Another trend is the high unemployment rate is partly explained by the fact that young people prefer to work at home, the advantages of which are obvious: convenient schedule, no attachment to a particular place of work (office) – hence the lack of travel expenses, meals. Of course, such work is not always legal, and payment usually passes tax. For example, the house employs translators, teachers, and representatives of the service sector – hairdressers, chefs, tailors, etc. Best of all – and in the office and at home – feel, of course, IT professionals. And the reason is not only in the economic problems of the state and individual enterprises, firms and companies, but also in the formation of a new business psychology in youth. Or rather – in a fundamentally new attitude towards working hours. Many who wants to combine work and education or training. But employers don't ready for that.

Thus, we can conclude that young people cannot find an appropriate job for the following reasons: overall reduction in the number of jobs has provoked the emergence of the labor market a large number of qualified professionals who make competition very difficult; even in a period of stability, employers were not enthusiastic to work for young professionals, and in times of crisis they are, if need frame, only a highly qualified and with some experience. That is, everywhere looking for experienced; on the one hand, the competence level of young specialists does not meet the requirements of employers, on the other, the needs of young people do not meet many of the proposals that exist today in the labour market.

In this context, the main stages of work to promote youth employment, improving competitiveness can be defined as follows: use active measures to promote employment; forming an active behavior on the labor market; career guidance support young people in the labor market; training in effective self-presentation; expansion of social dialogue and international partners in the area of activation behavior of young people in the labor market.

It should be admitted, that youth competitiveness include not only professional knowledge and qualification, and is formed of motivation for achieving broader skills: organization, communication, team work, decision making, self-confidence. According to a survey of employers these skills are the most wanted, and they are formed by participation in youth, volunteer, public organizations and by involving young people in training.

To enhance the employability of young people, build an effective system of career guidance Donetsk regional employment agency initiated the development of an action plan on vocational guidance in Donetsk region until 2018, approved by the head of regional state administration of February 29, 2016 № 131. Within these measures planned to strengthen following areas [9]:

1. The accelerated work with school pupils, their parents and teachers. The aim of this work - professional self-activation based on a clear understanding of their professional capacity (interests, inclinations, abilities) and the requirements of the regional labor market. Methods: informing about professions, giving advices about professions, the use (or not use) psychodiagnosis. In

practice, the Donetsk regional employment center is a long tradition - of career guidance activities such as lessons choice of professions, meetings that introduce the content of the profession, real working life lessons, days of career, vocational workshops, open days, fairs professions.

2. Career planning technology, namely the establishment of Portfolio career advancement. The current trend for students. Portfolio construction provides effective steps to career college graduates and young professionals self-employer. The goal - to convince a potential employer in its prospects.

3. Building skills of self-presentation in young people by involving them in training on job search techniques. Effective tool for unemployed youth. In this area the Donetsk regional employment center has been done and introduced new forms of work - video resume, online interview.

Video resume – a kind of resume that allows the employer to receive an initial impression of the candidate and decide on the appointment of his personal meeting. With the consent of the person video resume is stored in the so-called "bank of video" resume and demonstrated the potential employer.

The online interview is modern and convenient tool of cooperation between employers and contender for the job, which helps to save time and money, speed meeting, because the employer can quickly carry out the first stage of selection, thus speed up the hiring necessary for the company employees.

Currently, the efforts of a single employment service handle on integrated forecasting trends in the labor market and employment of the working population, especially young people, is extremely difficult. Development of social support and involvement of youth in economic activity contributes to the implementation of state employment policy in place in accordance with the Law of Ukraine "On Employment", Program activities employment Donetsk region and measures to support and develop entrepreneurship among unemployed youth.

In general, the implementation of measures to solve the problem youth employment must be integrated and implemented at different levels:

at the state level: job creation; stimulate the employers for hiring young professionals; formation of state order for training according to the needs of the economy, not on the capacity of educational institutions;

at regional level: vocational guidance of young people, taking into account regional peculiarities of the labor market; creation of information and consultancy centers and career building; deepening cooperation of educational institutions and employers in the region;

at the family level: assistance to parents on forming a child's understanding of the conscious and correct choice of profession; stimulate desire of the child to education and development.

Conclusions and suggestions. Youth – the main component of the labor market. It has the necessary capacity, implementation of which may soon significantly improve the economic and social position of society. In this context, the study of the problems of youth employment, finding ways to solve it is extremely important and relevant. It is appropriate to propose superior work with pupils of secondary schools, their parents and teachers, to intensify the process of creating a portfolio of career advancement, self-presentation skills among young people by involving them in training on search technology work in order to enhance the employability of young people and build an effective system of career guidance.

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Кабаченко Г. С. Особливості становлення та розвитку молодіжного сегменту на регіональному ринку праці

У статті досліджуються особливості становлення та розвитку молодіжного сегменту на регіональному ринку праці, здійснено оцінку стану молодіжної зайнятості у Донецькому регіоні, визначено проблеми молоді при працевлаштуванні в умовах соціально-економічного дисбалансу та запропоновано заходи щодо вирішення проблеми зайнятості молоді. В ході дослідження обгрунтовано, що в сучасних умовах розвитку економіки існує безліч проблем із забезпечення зайнятості молоді, які потребують розробки дієвих заходів щодо їх вирішення. Встановлено, що для розширення можливостей працевлаштування молоді доцільно проводити випереджальну роботу з учнівською молоддю загальноосвітніх шкіл, їх батьками та педагогами, активізувати процес створення портфоліо кар'єрного просування, забезпечити формування навичок самопрезентації у молоді шляхом залучення їх до тренінгів з техніки пошуку роботи, сприятиме підвищенню рівня зайнятості молоді, покращенню умов функціонування системи профорієнтації, підвищенню економічної активності та конкурентоспроможності молоді на ринку праці, зниженню рівня та тривалості безробіття.

Ключові слова: регіональний ринок праці, молодь, зайнятість, безробіття, конкурентоспроможність, регіональний центр зайнятості, професійна орієнтація, анкетування, планування кар'єри, навички самопрезентації.

Кабаченко А. С. Особенности становления и развития молодежного сегмента на региональном рынке труда

В статье исследуются особенности становления и развития молодежного сегмента на региональном рынке труда, осуществлена оценка состояния молодежной занятости в Донецком регионе, определены проблемы молодежи при трудоустройстве в условиях социально-экономического дисбаланса и предложены мероприятия по решению проблемы занятости молодежи. В ходе исследования обосновано, что в современных условиях развития экономики существует множество проблем по обеспечению занятости молодежи, которые требуют разработки действенных мероприятий по их решению. Установлено, что для расширения возможностей трудоустройства молодежи целесообразно проводить опережающую работу с учащейся молодежью общеобразовательных школ, их родителями и педагогами, активизировать процесс создания портфолио карьерного продвижения, обеспечить формирование навыков самопрезентации у молодежи путем привлечения их к тренингам по технике поиска работы, что будет способствовать повышению уровня занятости молодежи, улучшению условий функционирования системы профориентации, повышению экономической активности и конкурентоспособности молодежи на рынке труда, снижению уровня и продолжительности безработицы.

Ключевые слова: региональный рынок труда, молодежь, занятость, безработица, конкурентоспособность, региональный центр занятости, профессиональная ориентация, анкетирование, планирование карьеры, навыки самопрезентации.

Kabachenko G. Features of Formation and Development of the Youth Segment of the Regional Labour Market

The article examines the features of formation and development of the youth segment of the regional labor market, carried out assessment of youth employment in the Donetsk region, identified the problems of youth employment in the conditions of socio-economic imbalances and propose measures to address youth employment issues. The study proved that there are many challenges for youth employment in modern conditions of economic development, which requires the development of effective measures to address them. It was found that for the expansion of youth employment opportunities advisable to carry out pioneer work with young students of secondary schools, their parents and teachers, to strengthen the process of creating career development portfolio, to ensure the formation of self-presentation skills among young people by bringing them to training on techniques of job search that will enhance the level of youth employment, improving the conditions of functioning of vocational guidance systems, increased economic activity and the competitiveness of young people on the labor market, reduce the level and duration of unemployment.

Keywords: regional labor market, youth employment, unemployment, competitiveness, regional employment centers, vocational guidance, questioning, career planning, self-presentation skills.

Received by the editors: 30.11.2015
and final form 28.12.2015

Інститут економіки промисловості
Національної академії наук України

Державний заклад
«Луганський національний університет імені Тараса Шевченка»

Економічний вісник Донбасу

№ 4 (42) 2015

Здано до склад. 05.01.2016 р.

Підп. до друку 29.12.2015 р.

Формат 60х84 1/8. Папір офсет.

Гарнітура Times New Roman.

Друк ризографічний. Ум. друк. арк. 20,7.

Наклад 350 прим. Зам. № 1388.

Ціна вільна.

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