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Assessment of the social, ecologic and economic development of machine building enterprises

Abstract
Introduction. For industrial enterprises of Ukraine functioning under the conditions of increasing competition, uncertainty and dynamics of external environment, adherence to the interrelation principles of enterprises' socio-ecology-economic subsystems development in their dialectical unity and integrity becomes the key factor of their competitive ability.
Purpose. This research is aimed at formation of the theoretical and methodical bases of the assessment of enterprises' socio-ecology-economic development.
Methods. While conducting this research, the following methods were used: methods of structural analysis and grouping for complex diagnostics of enterprises' socio-ecology-economic development; calculation and analytical methods for assessing enterprises' ecologically oriented competitive ability.
Results. The article offers theoretical and methodical statements on the assessment of socio-ecology-economic development of machine building enterprises. Interrelation and conditionality in enterprises' socio-ecology-economic development level relevant to its strategic competitive ability are determined. The methodology of calculating an indicator of ecologically oriented competitive ability, which is a criterion of the enterprise development balance, has been grounded. The offered methodical approaches were approbated while at determining of socio-ecology-economic development rate of the public corporation «Research and production joint-stock company VNDIkompresormash». The value of the enterprise's ecologically oriented competitive ability was 0.82 in 2014, or 0.73 without taking into account the ecological factor.
Conclusion. The offered methodical approach to the complex diagnostics of enterprises' socio-ecology-economic development on the basis of the integral and partial indexes of socio-ecology-economic development, can be used for enterprises' socio-economic development planning and for investment objects determination. Methodical approaches to the assessment of ecologically oriented competitive ability can be used by manufacturing enterprises of different branches of industry with the aim of forming an organizational and economic mechanism of competitive ability, taking into account sources of enterprises' self-development, their project model expediency, enterprises' system sustainability, directivity and regularity of its development, importance of enterprises' adaptation to the influence of external environment factors and the social value of enterprises' production.

Keywords: Socio-ecology-economic Development; Social Development Index; Economic Development Index; Ecological Development Index; Competitive Ability; Ecologically Oriented Competitive Ability

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Оцінка соціо-еколого-економічного розвитку підприємств машинобудівної галузі
Анотація. У статті запропоновані теоретичні та методичні положення щодо оцінки соціо-еколого-економічного розвитку підприємств машинобудівної галузі. Встановлено взаємозв'язок і взаємообумовленість рівня соціо-еколого-економічного розвитку підприємства з його стратегічною конкурентоспроможністю. Обґрунтована методика розрахунку показника еколого-орієнтованої конкурентоспроможності, який є критерієм збалансованості розвитку підприємства. Запропоновані методичні підходи, апробовані під час визначення соціо-еколого-економічного рівня розвитку акціонерного товариства «НВАТ ВНДІкомпресормаш».
Ключові слова: соціо-еколого-економічний розвиток; індекс соціального розвитку; індекс економічного розвитку; індекс екологічного розвитку; конкурентоспроможність; еколого-орієнтована конкурентоспроможність.

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Оценка социо-эколого-экономического развития предприятий машиностроительной отрасли

Аннотация. В статье предложены теоретические и методические положения по оценке социо-эколого-экономического развития предприятий машиностроительной отрасли. Установлена взаимосвязь и взаимообусловленность уровня социо-эколого-экономического развития предприятия с его стратегической конкурентоспособностью. Обоснована методика расчета показателя эколого-ориентованной конкурентоспособности, который является критерием сбалансированного развития предприятия. Предложенные методические подходы апробированы в процессе определения уровня социо-эколого-экономического развития акционерного общества «НПАО ВНИИ компрессормаш».
Ключевые слова: социо-эколого-экономическое развитие; индекс социального развития; индекс экономического развития; индекс экологического развития; конкурентоспособность; эколого-ориентированная конкурентоспособность.

1. Introduction. For industrial enterprises of Ukraine functioning under the conditions of increasing competition, uncertainty and dynamics of external environment, adherence to the interrelation principles of enterprises' socio-ecology-economic subsystems development in their dialectical unity and integrity becomes the key factor of their competitive ability. The topicality of the research of socio-ecology-economic development of economic entities is connected with some contradictions between commercial interests of enterprises in the market, interests of employees, social development and environmental protection. Elaboration of the efficient methods and instruments of enterprises' socio-ecology-economic development measurement enables us to unambiguously interpret the obtained results and gain valuable experience from both the research and managerial points of view.

2. Brief Literature Review. Problems of enterprises' development have been researched in the works of scientists such as J. Gowdy (1994) [1], M. Albert (1992), M. Mescon (2009), N. Afanasjev (2005), V. Vasylenko (2005), V. Gejets (2006), O. Kuzmin (2008), O. Rajevneva (2011), L. Stryzhkova (2004) et al. In spite of a great amount of works grounding the theoretical bases of enterprises' development, an issue of elaboration of a methodical basis of the assessment of enterprises' socio-ecology-economic development remains topical. The solution of the given task will permit not only to describe resource potential of the economic system and changes in its dynamics, but also to form a development strategy related to the assumption of competitive ability and stability.

3. Purpose. To develop theoretical and methodical statements for the assessment of socio-ecology-economic development of machine-building enterprises.

4. Results. On the basis of generalization of the existent approaches to defining the notion «enterprise development» [2], we consider enterprise socio-ecology-economic development to be a characteristic of the enterprise's dynamic state, reflecting the process of interconnected economic, ecological and social relations, which are regulated by institutional environment and aimed at the formation of the enterprise's sustainable economic development and its competitive ability.

It is offered to assess the enterprise's socio-ecology-economic development on the basis of index calculation of economic, social and ecological development.

Calculation of the economic development index is based on the methodology of economic efficiency determination, which could be seen as resource approach modification [3, 4, 5]. The basis of the approach is not contrasting of the production results and economic resources used for their achievement, but transformation of the incoming economic resources into final result, which are defined as consumer cost and cost of manufactured products. It is offered to use the method of calculation of a generalizing indicator of production economic efficiency, the essence of which is that it takes into account changes in scale of production and combines indicators of each economic

resource in use and the change rates. It permits to determine their constituent results.

On the basis of this methodology, the calculation of the production economic efficiency indicator of the public corporation «Research and production joint-stock company VNDIkompresormash» was performed (Table 1).

In Table 1 we have determined the index of production economic efficiency (I_{econ}) of the public corporation «Research-and-production joint-stock company VNDIkompresormash», which equals 0.85. If $(I_{econ}) > 1$, the economic state of the enterprise is rather stable, it is characterized by an increase of economic production rate during the period under research compared to the previous one; if $(I_{econ}) = 1$, the economic state of the enterprise is not changed and characterized by a medium level; if $(I_{econ}) < 1$, the economic state of the enterprise is characterized by a low level.

As witnessed by the calculation results, in 2013 compared to 2012, production economic efficiency of the public corporation «Research and production joint-stock company VNDIkompresormash» decreased by 15%.

The calculation of the enterprise's economic development index is based on the comparison of indicators of the given enterprise with indicators of the enterprise, which is considered to be reference value. The reference enterprise has the best individual indicators of economic development.

$$I_{e.}^{econ.d.} = I_e / I_{e.ref.}, \qquad (1)$$

where $I_{e.}^{econ.d.}$ – index of the enterprise's economic development;

$I_{econ.}$ – index of production economic efficiency of i enterprise;

$I_{econ.ref.}$ – index of standard production economic efficiency of i enterprise.

Thus, for the public corporation «Research-and-production joint-stock company VNDIkompresormash», economic development index is: (0.85/1.05 = 0.80). The criteria of the economic development level determination are given in Table 2.

The enterprise's social development is considered as a complex of such characteristics as the employees' health, level of their knowledge and culture, experience, skills and professionalism, influencing labour productivity.

It is offered to determine the enterprise's social development index as the geometric mean value of partial dynamic indicators of social development:

$$I_{e.}^{soc.d.} = \sqrt[5]{I_p \cdot I_t \cdot I_s \cdot I_{st} \cdot I_m}, \qquad (2)$$

where $I_{e.}^{soc.d.}$ – enterprise's social development index;

I_p – productivity index, which is determined by the ratio of labour productivity indicators in the current year compared to the previous year;

Tab. 1: **Calculation of the production economic efficiency indicator of public corporation «Research-and-production joint-stock company VNDIkompresormash»**

№		Indicator	Unit	Calculation algorithm	2012	2013	Index to the previous year
				Incoming data			
1.1	GI^*	Gross income and its components (actual price)	thousand UAH	Income (receipts) from products realization (goods and services), 010; other operating income, 060; income from participation in the capital, 110; other financial income, 120; other income, 130 $010\,f_2+060\,f_2+110\,f_2+120\,f_2+130\,f_2$	164,164	155,902	0.94
1.2	IC^*	Materials and equated to them expenses (intermediate consumption)	thousand UAH	Material expenses, 230; other operating expenses, 270; financial expenses, 140; expenses of participation in the capital, 150; other expenses, 160 $230\,f_2+270\,f_2+140\,f_2+150\,f_2+160\,f_2$	95,097	128,753	1.35
1.3	A	Amortization	thousand UAH	$260\,f_2$	2,564	2,564	1
1.4	NP^*	Net production	thousand UAH	$GI^* - (IC^* + A)$	66,503	24,685	0.36
1.5	I^A_{PP}	Aggregated index of producers prices		$\dfrac{I_1 \cdot I_2 \cdot I... / n}{(I_1 * I_2 * I...)}$ – appropriate indices in the industry; n – number of indexes	100,3	100,5	–
1.6	G_p	Gross income in the prices of the previous year	thousand UAH	GI / I_{pp}	164,164	119,925	0.73
				Economic resources			
2.1	CA	Circulating assets	thousand UAH	Accounting indicators (line code №1), total by chapter II current assets, 260 f_1	43,161	44,923	1.040
2.2	FA	Fixed assets	thousand UAH	Accounting indicators (line code №1), total by chapter 1 non-current assets 080 f_1; capital property depreciation 032 f_1; cumulative amortization of non-material assets 012 f_1	19,663	17,556	0.89
2.3	N	Average accounting number of personnel in full employment equivalent	persons	Accounting indicators	420	412	0.98
				Calculated indicators			
				Specific gravity of the value constituents in gross income			
3.1	γ_{IC}	Material and equated to them expenses	unit fraction	IC / GI	0.57	0.82	–
3.2	γ_A	Amortization	unit fraction	A / GI	0.012	0.016	–
3.3	γ_{NP}	Net production	unit fraction	NP / GI	0.405	0.157	–
				Economic resources return			
4.1	μ	Circulating assets	$\frac{UAH.GI}{UAH.CA}$	GI / CA	3.8	3.4	0.89
4.2	f	Fixed assets	$\frac{UAH.GI}{UAH.FA}$	GI / FA	8.39	8.8	1.04
4.3	LP	Labour productivity	$\frac{UAH.GI^p}{1 person}$	GI_p / N	390	291	0.80
5.	GI_E	Economic effect	thousand UAH	$(I_\mu \cdot IC_1 + I_f \cdot A_1 + I_{LP_1} \cdot NP)_1 - GI_1$	–	-23104	–
6.	C_e	Coefficient of economic efficiency	units	$\dfrac{GI_E}{GI}$ or $(I_\mu \cdot \gamma_{ic_1} + I_f \cdot \gamma_{A_1} + I_{LP} \cdot \gamma_{NP_1}) - 1$	–	-0,140	–
7.	I_{econ}	Index of production economic efficiency	units	$1 + C_e$ or $I_\mu \cdot \gamma_{ic_1} + I_f \cdot \gamma_{A_1} + I_{LP_1} \cdot \gamma_{NP_1}$	1	–	0.85
8.	R_e	Rates of production economic efficiency change	%	$I_e \cdot 100$	100	–	85.9

GI* – including financial and investment activity into account

Accounting indicators (form line code №2) / *Accounting indicators (form line code №2)*

Source: Authors' calculation based at Voronin's O. O. methodology and database [6; 7; 8]

I_t – index of advanced training, which is determined by the ratio of advanced training indicators in the current year compared to the previous year;

I_s – index of salary, which is determined by the ratio of salary fund indicators in the current year compared to the previous one with taking inflation and devaluation into account;

I_{st} – index of staff turnover, which is determined by the ratio of staff turnover indicators in the current year compared to the previous one (the less turnover indicator is, the more optimal value of the turnover index is); that is why, in order for social development index value not to decrease, destimulants indicators are used;

I_m – index of personnel's motivation and stimulation, which is determined by the ratio of additional payments number indicators in the current year compared to the previous one.

Thus, for the public corporation «Research-and-production joint-stock company VNDIkompresormash» social development index is:

$$I_{e.}^{soc.d.} = \sqrt[5]{0,80 \cdot 0,91 \cdot 0,99 \cdot 1,1 \cdot 0,9} = 0,933. \quad (3)$$

While calculating of the ecologic development index, one can take into account the indicator of ecological payments as a generalizing characteristic according to qualitative and quantitative pollutant composition and the indicator of capital investments and current expenses of the enterprises, organizations, and institutions for protection and rational use of natural resources by nature protection activity directions.

Payment amount depends both on the number of harmful substances in the environment, and on the class of harmful substances, which is taken into account at ecological tax determination.

In its turn, enterprise's ecological development depends not only on the pollution rate, but also on the equipment, which is used for its protection. At that, equipment quality depends directly on the capital investments and current expenses for environmental protection [9].

Thus, it is offered to determine ecological development index as geometric mean value of such indicators as: indicator of anthropogenic stress, which is determined on the basis of ecologic tax amount, indicator of ecological protection, which is formed on the basis of the amount of capital investments and current expenses paid for environmental protection.

$$I_{e.}^{ecol.d.} = \sqrt{I_{anthr.stress} \cdot I_{ecol.prot.}}, \quad (4)$$

where $I_{e.}^{ecol.d.}$ – index of ecological development;

$I_{anthr.stress}$ – indicator of anthropogenic stress;
$I_{ecol.prot.}$ – indicator of ecological protection.

The indicator of anthropogenic stress is determined by the formula:

$$I_{anthr.stress} = ET_0 / ET_1, \quad (5)$$

where ET_0 – ecological taxes in the initial year;
ET_1 – ecological taxes at the previous year.

The indicator of ecological protection is calculated by the formula:

$$I_{ecol.prot} = CI_1 / CI_0, \quad (6)$$

where CI_1 – capital investments and current expenses for environmental protection for the previous year;

CI_0 – capital investments and current expenses for environmental protection in the initial year.

While conducting the research related to the issues of the enterprise's ecological development, it was determined, that special attention should be paid to the problems of the formation of the enterprise's ecologically oriented competitive ability

Tab. 2: **Determination of socio-ecology-economic balance level of administrative and territory unit by integral static index**

$I_{e.}^{econ.d.}$ value	Economic development rate	$I_{e.}^{econ.d.}$ value	Economic development rate
$I_{e.}^{econ.d.} = 1$	Very high	$0.6 > I_{e.}^{econ.d.} > 0.4$	Satisfactory
$1.0 > I_{e.}^{econ.d.} > 0.6$	High	$0.4 > I_{e.}^{econ.d.} > 0.2$	Unstable development
$0.8 > I_{e.}^{econ.d.} > 0.6$	Normal	$0.2 > I_{e.}^{econ.d.} > 0$	Depressive development

Source: Authors' suggestion

[10]. Therefore, we offer the authors' method of the ecologically oriented competitive ability indicator determination, which is a criterion of the enterprise development balance shown in Table 3.

Ranking of the ecologically oriented competitive ability indicator values are given in Table 4.

The proposed methodology of the ecologically oriented competitive ability indicator determination was carried out on the example of the public corporation «Research and production joint-stock company VNDIkompresormash». Table 5 presents the results of calculation of the ecologically oriented competitive ability indicator and the enterprise's competitive ability rate excluding the ecological factor of the public corporation «Research and production joint-stock company VNDIkompresormash».

The value of the enterprise's ecologically oriented competitive ability in 2014 was 0.82 or 0.73 without taking into account the ecological factor. If the level of competitive ability is from 0.81 to 1.00, it is high as it is foreseen that the enterprise has a considerable potential of development, self-organization, and external relations realization of potential. Thus, the level of ecologically oriented competitive ability is high, and the level of the enterprise's competitive ability, if the ecological factor is not taken into account, is sufficient.

It is necessary to mention that system competitive ability of the enterprise without taking ecological factor into account has a lower level than a similar indicator of the enterprise's ecologically oriented competitive ability level. Thus, the enterprise's ecologically oriented competitive ability value is higher, which witnesses the existence of the perspectives of the enterprise's development under the condition of realization of sustainable development conception. The indicator of the ecologically oriented competitive ability can be used for the enterprise development planning, elaboration and grounding of its strategy.

Summarizing the above-mentioned, it is necessary to notice that activity assessment of a machine building enterprise is offered in the context of the socio-ecology-economic interrelations. Today, overcoming the contradictions which arise in the system of socio-ecology-economic development is a rather important condition for efficient functioning of any enterprise and its competitive ability provision.

5. Conclusion. The work deals with the theoretical grounding and methodical provisions of the applied task solution which is the development of methodical statements of the assessment of socio-ecology-economic development of machine-building industry enterprises. The offered methodical approach to complex diagnostics of enterprises' socio-ecology-economic development on the basis of the integral and partial indexes of socio-ecology-economic development can be used for enterprise's socio-economic development planning, assessing of their resource potential as of investment objects, forming

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Tab. 3: Assessment of the ecologically oriented competitive ability rate

$$C = P_{devel.(1-3)} \cdot C_1 + P_{self-organiz.(4-6)} \cdot C_2 + P_{extern.rel.realiz.(5-7)} \cdot C_3 + (\sum_{i=1}^{n} \alpha_i \cdot \beta_i \cdot K_{m_i}) \cdot C_4 \to 1$$

where $P_{devel.(1-3)}$ – enterprise's development potential, which is formed at the first, second and third stages of enterprise's life cycle; $P_{self-organiz.(4-6)}$ – enterprise's self-organization potential, which is formed at the fourth, fifth, and sixth stages of enterprise's life cycle; $P_{extern.rel.realiz.(5-7)}$ – potential of the realization of enterprise's external relations with environment, which is formed and realized at the fifth, sixth and seventh stages of enterprise's life cycle; C, C_2, C_3, C_4 – coefficients of enterprise's competitive ability constituents significance; $i=(1,...n)$ – number of products titles; α_i – specific gravity of i goods in the enterprise sales volumes; β_i – indicator of market significance, in which the goods are represented (for developed countries (the USA, Japan, countries of the European Union, Canada) – it is recommended to take market significance as 1.0, for the rest of the countries – 0.7, for internal market – 0.5); C_{g_i} – goods competitive ability.

Enterprise's development potential	Self-organization potential	External relations realization potential
$P_{devel(1-3)} = \dfrac{E_{R\&D}}{E_{R\&D}^e} \cdot C_1 + \dfrac{E_{innovat.p.p.}}{E_{innovat.p.p.}^e} \cdot C_2 +$ $+ \dfrac{E_{innovat.p.}}{E_{innovat.p.}^e} \cdot C_3 + \dfrac{E_{innovatrealiz.}}{E_{innovatrealiz.}^e} \cdot C_4 +$ $+ \dfrac{E_{innovatutilizat.}}{E_{innovatutilizat.}^e} \cdot C_5 + \dfrac{E_{innovatserv.}}{E_{innovatserv.}^e} \cdot C_6 +$ $+ \dfrac{E_{ecol.}}{E_{ecol.}^e} \cdot C_7 \to 1$	$P_{self-organiz(4-6)} = P_{proport.} \cdot C_1 +$ $+ P_{par.} \cdot C_2 + P_{dir.fl.} \cdot C_3 +$ $+ P_{rhythm.} \cdot C_4 + P_{stead.} \cdot C_5 +$ $+ P_{ecolcomp.} \cdot C_6 \to 1$ Production ecological compatibility: $P_{ecol.level} = \dfrac{M_p}{M_p^e} \cdot C_1 + \dfrac{E_{pow.}}{E_{pow.}^e} \cdot C_2 +$ $+ \dfrac{W_p}{W_p^e} \cdot C_3 + \dfrac{P_{ecol.}}{P_{ecol.}^e} \cdot C_4 + \dfrac{P_n}{P_n^e} \cdot C_5.$	$P_{externrel.realiz} = \dfrac{\Delta B_{innovat.}^e}{\Delta B_{innovat.}^i} \cdot C_1 +$ $+ \dfrac{\Delta P_{organizat.level}^e}{\Delta P_{organizat.level}^i} \cdot C_2 + \dfrac{\Delta B_{environmpollut.}^e}{\Delta B_{environmpollut.}^i} \cdot C_3 +$ $+ \dfrac{\Delta B_{markshare}^e}{\Delta B_{competitens.}^i} \cdot C_4 + \dfrac{\Delta C_g^e}{\Delta C_g^i} \cdot C_5 \to 1$
where $B_{R\&D}$, $B_{R\&D}^e$ – planned and standard (normative) share of expenses for R&D organization in the structure of enterprise's general expenses; $E_{innovat.p.p.}$, $E_{innovat.p.p.}^e$ – planned and standard (normative) share of expenses for innovations in the field of complex production preparation (design, technological, organizational) in the structure of enterprise's general expenses; $E_{innovat.p.}$, $E_{innovat.p.}^e$ – planned and standard (normative) share of expenses for innovations in the field of production in the structure of enterprise's general expenses; $E_{innovat.realiz.}$, $E_{innovat.realiz.}^e$ – planned and standard (normative) share of expenses for innovations in the field of production realization in the structure of enterprise's general expenses; $E_{innovat.utilizat.}$, $E_{innovat.utilizat.}^e$ – planned and standard (normative) share of expenses for innovations in products utilization in the structure of enterprise's general expenses; $E_{innovat.serv.}$, $E_{innovat.serv.}^e$ – planned and standard (normative) share of expenses for innovation in the field of consumer service in the structure of enterprise's general expenses; $E_{ecol.}$, $E_{ecol.}^e$ – planned and standard (normative) share of expenses for ecological innovations by the stages of product life cycle in the structure of enterprise's general expenses; C_1, C_2, C_3, C_4, C_5, C_6, C_7 – significance coefficients of the potential components of the enterprise.	where $P_{proport.}$, $P_{par.}$, $P_{dir.fl.}$, $P_{rhythm.}$, $P_{stead.}$, $P_{ecol.comp.}$ – indicators of proportionality, parallelism, direct flow, rhythmicity, steadiness, and ecological compatibility of the production processes organization; C_1, C_2, C_3, C_4, C_5, C_6 – significance coefficients of production processes organization rate. M_p, M_p^e – factual and reference consumption of materials for production; $E_{pow.}$, $E_{pow.}^e$ – factual and standard power intensity of production; W_p, W_p^e – factual and reference waste products capacity; $P_{ecol.}$, $P_{ecol.}^e$ – factual and industry level of goods ecological compatibility according to the kind of economic activity; P_n, P_n^e – factual and reference production nature capacity; C_1, C_2, C_3, C_4, C_5 – significance coefficients of the production ecological compatibility indicators value.	where $\Delta B_{innovat.}^e$ – innovations expenses growth by stages of life cycle at the enterprise; $\Delta B_{innovat.}^i$ – innovations expenses growth by kinds of work at product life cycle stages in the industry; $\Delta P_{organizat.level}^e$ – production processes organizational level change at the enterprise; $\Delta P_{organizat.level}^i$ – production organizational level change in the industry; $\Delta B_{environm.pollut.}^e$ – environmental pollution volume growth, caused by enterprise's activity; $\Delta B_{environm.pollut.}^i$ – environmental pollution volume growth in the industry; $\Delta B_{mark.share}^e$ – enterprise market share growth; $\Delta B_{compet.int ens.}^i$ – competition intensity change in the industry; ΔC_g^e – competitive ability level change of the enterprise goods; ΔC_g^i – goods competitive ability level change in the industry; C_1, C_2, C_3, C_4, C_5, C_6 – coefficients of external environment factors value, which are important for competitive ability potential realization.

Source: Authors' suggestion

Tab. 4: Ranking of the competitive ability indicator

C value	Ecologically oriented competitive ability rate
$0 < C < 0.71$	project
$0.71 < C < 0.8$	sufficient
$0.8 < C < 1$	high

Source: Authors' suggestion

Tab. 5: Comparison table of enterprise's competitive ability level determination including ecological factor and excluding it

Year	Enterprise's ecologically oriented competitive ability rate	Enterprise's competitive ability rate excluding ecological factor
2012	0.84	0.74
2013	0.85	0.74
2014	0.82	0.73

Source: Authors' suggestion

their development strategy, grounding the priorities of competitive ability and stability. Methodical approaches to the assessment of the ecologically oriented competitive ability can be used by manufacturing enterprises of different branches of industry with the aim of forming the organizational and economic mechanism of competitive ability, taking into account sources of enterprises' self-development, their project model expediency, system sustainability of the enterprise, directivity and stability of its development, the importance of enterprises' adaptation to the external environment influence and the social value of enterprises' production.

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