

УКД 658.1

L. Petrenko
PhD in Economics, Associate Professor,
SHEE «Kyiv National Economic University named after Vadym Hetman», Ukraine
Researcher ID: G-7416-2017
ORCID ID: 0000-0001-7851-9644

VALUE ADDED FORMED BY THE LEADING MACHINE-BUILDING ENTERPRISES OF UKRAINE

Л. А. Петренко,
к.е.н., доцент кафедри економіки підприємств,
ДВНЗ «Київський національний економічний університет ім. Вадима Гетьмана», м. Київ

ФОРМУВАННЯ ДОДАНОЇ ВАРТОСТІ ПІДПРИЄМСТВАМИ-ЛІДЕРАМИ МАШИНОБУДУВАННЯ УКРАЇНИ

The issue of value added formation by leading enterprises of machine building in Ukraine is fundamental within the current article. Value added within machine-building is one of fundamental aspects to Ukrainian economic researches and industrial experts. Based on the analysis of performance indicators of leading domestic machine-building enterprises (PJSC "Zaporizh Transformer", PJSC "Kramatorsk Weighing Machine Plant", PJSC "Bogdan Motors Automobile Company"), the versatile nature of the products of these enterprises was determined. The performance of chosen enterprises is serving as a valuable information base in terms of testing those scientific hypotheses that have been put forward on a methodological level in the context of researched effects of diverse set of causes on determining the sustainability/unsustainability and substantiation of management influence in the form of ensuring their sustainable development taking into account the demands and challenges of a dynamic business environment. Despite the fact that machine building is not a universal type of industrial activity, which somewhat complicates the performance comparison of these enterprises, the main criterion for their selection has been the availability of such comparison as the ability to research scientific issues taking into account the features and specifics of not only the domestic but also the international market environment, and to identify the causes and patterns that determine the relatively high level of ability to generate value that underlies the economic sustainability of business entities. The peculiarity of the machine-building enterprises under consideration is that the basis of their activity is a powerful innovative potential, which is embodied in the technology and experience of employees, as well as a wide geography of sales. The indicators of value added formed by the selected machine-building enterprises in 2011–2016 are analyzed. The indicators forming the return on equity of the selected machine-building enterprises under consideration are given. An assessment of the activities of selected enterprises, considered by the criterion of value added, allows us to draw conclusions about the specifics of value added by leading companies in machine-building branch. In order to assess the cumulative economic performance as a consequence of the adoption and implementation of managerial decisions and on the basis of a generalized indicator of economic status as a form of manifestation of systemic properties of the enterprise, the totality of indicators is substantiated in accordance with the content of factor interpretation of the residual operating income model (ReOI model). Analytical innovation is a set of indicators in the projection "Growth", which is determined in accordance with the model of the Golden Rule of Economy, sustainable growth models (SGR,

Sustainable Growth Rate), models of the value of growth opportunities (VGO, value of growth opportunities), which allowed us to take into account the dependence of the change rates of the basic performance VBM indicators on different characteristics of the enterprise activity.

У статті підіймається питання формування доданої вартості підприємствами-лідерами машинобудування України. На основі аналізу індикаторів результативності провідних вітчизняних машинобудівних підприємств (ПрАТ «ЗапоріжТрансформатор», ПАТ «Краматорський завод вагових верстатів», ПАТ «Автомобільна компанія «Богдан Моторс»), визначено різнобічний характер продукції цих підприємств. Особливістю машинобудівних підприємств, що розглядаються, є те, що основою їх діяльності є потужний інноваційний потенціал, який втілений у технологіях та досвіді працівників, а також широкій географії продажів. Проаналізовано показники доданої вартості, сформовані обраними машинобудівними підприємствами у 2011–2016 рр. Наведено показники, що формують рентабельність власного капіталу обраних машинобудівних підприємств, що розглядаються. Зроблено оцінку діяльності обраних підприємств, що розглядаються за критерієм формування доданої вартості, дозволяє зробити висновки стосовно специфіки формування доданої вартості підприємствами-лідерами машинобудування.

Keywords: *added value, key efficiency indicators, mechanical engineering, development potential, sales geography.*

Ключові слова: *додана вартість, ключові показники ефективності, машинобудування, потенціал розвитку, географія продажів.*

Introduction. The current conditions of the Ukrainian economic environment are characterized by a high level of uncertainty, which is associated with significant fluctuations in the world economic system. Problems of the Eurozone debt crisis, possible changes in the BRIC policy, uncertainty about balancing the structural relationships between the US and Chinese economies, reducing the tendency of international investment structures to risk against the backdrop of declining investment trends in the world economy can significantly affect the development conditions of the domestic business environment by disrupting it with not only internal political and economic problems but also with external influences that multiply in the Ukrainian economy. In the context of existing structural relationships, domestic business remains vulnerable to the external influence, primarily due to low level of manufacturability, investment activity, and hence investment attractiveness for strategic investors. The magnitude of negative consequences, which can be caused by the low level of economic sustainability of business structures, prompt economists and practitioners to seek securing mechanisms, and the main methodological issue under discussion is finding a balance of interests between current benefits and strategic business positions.

Analysis of recent research and publications. Value added within machine-building is one of fundamental aspects to Ukrainian economic researches and industrial experts. The pivotal role is played by national analytical reports. In particular, Industry of Ukraine reports, Statistical yearbooks and publications, YouControl reports [1-10] are considered as an analytical system for analysis of value added formed by the leading machine-building enterprises. The system generates a complete dossier for each company in Ukraine based on open data, monitors changes in state registers and visualizes relations between affiliates. The unique technology allows to obtain up-to-date (at the time of request) information about the company or FLP from more than 50 official data sources.

Formulation of the objectives. Central to the entire research is value added formed by the leading machine-building enterprises of Ukraine, which are considered on the basis of Ukrainian powerful machine-building enterprises analytic.

Results of the research. In order to assess the cumulative economic performance, seven domestic powerful machine-building enterprises (Turboatom PJSC, Novokramatorsky Machine-Building Plant PrJSC¹, Dniprovazhmash PJSC, ZaporizhTransformator PrJSC, Kryukov Railway Car Building Works PJSC, Automobile Company Bogdan Motors PJSC²) have been selected, which are characterized by the following features:

- All enterprises manufacture machine-building products that are represented in different product groups
- Among the selected enterprises, there are those characterized by a high level of dependence on the Russian sales market (NMBP PrJSC, Dniprovazhmash PJSC, Kryukov Railway Car Building Works PJSC), the CIS sales market (ZaporizhTransformator PrJSC, Kramatorsk Heavy Duty Machine Tool Building Plant PJSC, Automobile

¹ Hereinafter referred to as NMBP PrJSC

² AC Bogdan Motors PJSC

Company Bogdan Motors PJSC), and those enterprises whose dependence on the CIS market is not critical (Turboatom PJSC)

– During 2011–2016, the activity of the selected enterprises was profitable throughout the research period (Turboatom PJSC, NMBP PrJSC), the trend of profitability/unprofitability was unstable (Dniprovazhmash PJSC, ZaporizhTransformator PrJSC, Kryukov Railway Car Building Works PJSC, Kramatorsk Heavy Duty Machine Tool Building Plant PJSC), activities were unprofitable during the research period (Automobile Company Bogdan Motors PJSC)

Development trends of the selected *machine-building enterprises* absolutely do not reflect the business situation in the domestic machine-building industry, but at the same time, these enterprises shape the intellectual image of the Ukrainian machine-building industry. Powerful export-oriented enterprises (ZaporizhTransformator PrJSC, Turboatom PJSC, Kryukov Railway Car Building Works PJSC, Motor Sich PJSC) were selected for the research, the performance of which may serve as a valuable information base in terms of testing those scientific hypotheses that have been put forward on a methodological level in the context of researched effects of diverse set of causes on determining the sustainability/unsustainability and substantiation of management influence in the form of ensuring their sustainable development taking into account the demands and challenges of a dynamic business environment.

The feature of the machine-building enterprises under consideration is that the basis of their operation is a powerful decades-old innovative potential that is embodied in the technology and experience of employees, as well as the following sales geography: Turboatom PJSC exports 75% of its sales in 45 countries of the world, ZaporizhTransformator PrJSC exports 90% of products in 86 countries, Motor Sich PJSC exports 95% of products in almost 100 countries, Kryukov Railway Car Building Works PJSC exports 70% of products in 20 countries. The key problems of the selected enterprises are also similar: limitation of export supply to the Russian Federation; the enterprises are competitive in the markets of the CIS, Africa, India, Latin America, regarding the western technology markets, the prospects of competition can only be price-related. However, for some types of products, domestic machine-building giants are present in the international competitiveness ratings in comparison with the world machine-building leaders.

Despite the fact that machine building is not a universal type of industrial activity, which somewhat complicates the performance comparison of these enterprises, the main criterion for their selection has been the availability of such comparison as the ability to research scientific issues taking into account the features and specifics of not only the domestic but also the international market environment, and to identify the causes and patterns that determine the relatively high level of ability to generate value that underlies the economic sustainability of business entities.

The performance assessment of the selected enterprises under consideration by the criterion of value added formation (Table 1) allows making the following conclusions.

Table 1. Indicators of value added formed by the selected machine-building enterprises in 2011–2016

Indicators	2011	2012	2013	2014	2015	2016
1	2	3	4	5	6	7
1. Residual Operating Income (<i>ReOI</i>), UAH thousand						
– Turboatom PJSC	-46,170	-175,669	-48,158	-128,699	543,127	117,100
– NMBP PrJSC	-918,384	-969,267	-862,042	-890,639	-468,452	-956,670
– Dniprovazhmash PJSC	286,894	494,950	-67,047	-69,815	-65,083	-128,893
– ZaporizhTransformator PrJSC	562,600	526,031	256,597	-2,355,464	-2,668,895	-964,434
– Kryukov Railway Car Building Works PJSC	-9,749	597,956	-486,354	-1,090,577	-1,021,949	-656,995
– Kramatorsk Heavy Duty Machine Tool Building Plant PJSC	-73,303	-86,680	-83,956	-262,076	-53,865	-66,123
– AC Bogdan Motors PJSC	-516,098	-940,513	-759,807	-1,471,647	-1,277,846	-761,376
2. Net Income (<i>NI</i>), UAH thousand						
– Turboatom PJSC	427,293	308,862	582,944	637,397	1,632,751	1,065,328
– NMBP PrJSC	170,719	77,231	226,543	353,633	952,424	460,288
– Dniprovazhmash PJSC	-8,838	20,185	1,441	1,127	13,940	-70,994
– ZaporizhTransformator PrJSC	912,543	947,068	329,180	-2,282,248	-2,668,586	-931,245
– Kryukov Railway Car Building Works PJSC	680,222	781,593	339,377	-347,572	-416,725	-112,848
– Kramatorsk Heavy Duty Machine Tool Building Plant PJSC	14,242	1,550	1,284	-247,052	-127,490	-96,858
– AC Bogdan Motors PJSC	-5,887	-323,436	-190,793	-1,086,622	-810,743	-275,245
3. Ratio of return on capital to the critical value ($r_{Prof.cap}$)						

– Turboatom PJSC	0.90	0.64	0.92	0.83	1.50	1.12
– NMBP PrJSC	0.17	0.09	0.21	0.28	0.67	0.32
– Dniprovazhmash PJSC	5.82	8.44	0.02	0.02	0.18	0.00
– ZaporizhTransformator PrJSC	2.42	2.23	1.87	0.00	0.00	0.00
– Kryukov Railway Car Building Works PJSC	0.99	1.71	0.41	0.00	0.00	0.00
– Kramatorsk Heavy Duty Machine Tool Building Plant PJSC	0.39	0.02	0.08	0.00	0.00	0.00
– AC Bogdan Motors PJSC	0.28	0.00	0.00	0.00	0.00	0.00

Note:



- positive value of the corresponding indicator

Source: Calculated by the author in accordance with [1-5]

During 2011–2016, four of seven selected enterprises generated positive flows of business value added (Turboatom PJSC, Dniprovazhmash PJSC, ZaporizhTransformator PrJSC, Kryukov Railway Car Building Works PJSC). Turboatom PJSC is characterized by the profitability during 2011–2016, however, only during 2015–2016, the cost dynamics was increasing. During 2011–2014, the operating capital profitability was insufficient to cover the cost of capital, while the ratio of the actual level of return on capital to the critical one had no stable trend of changing and fluctuated within 0.64–0.92.

Dniprovazhmash PJSC was unprofitable in 2011, while the estimated residual operating income was positive. This is due to the fact that the *ReOI* calculation is based on the amount of *EBI*, and this year, the enterprise paid a heavy amount for the use of debt capital (UAH 355,211 thousand). At the same time, during the profitable activity in 2012–2015, the enterprise provided the formation of positive *ReOI* flows only in 2012, and in other years, the return on capital did not cover the cost of capital.

During the profitable activity in 2011–2013, ZaporizhTransformator PrJSC provided a positive *ReOI*. As a result of the corporate conflict that arose out of a scandal surrounding one of the major consumers of Ukrenergo products and lasted between the joint owner of ZaporizhTransformator PrJSC, K. Hryhoryshyn, and the Ukrainian government headed by A. Yatsenyuk during 2014–2015, the enterprise lost a significant amount of domestic orders, which led to the unprofitability during 2014–2016.

During 2011–2013, when Russian Federation was the main sales market, Kryukov Railway Car Building Works PJSC was characterized by profitability, but during this period only in 2012, profitability of operating capital covered the cost of capital. Since the Russian market was lost, the enterprise activity became unprofitable.

The main aspects that determine the value added flows of the enterprises are the cost of capital and its profitability. In terms of cost of capital, the highest values were in NMBP PrJSC and Turboatom PJSC (Table 2).

Table 2. Indicators of the cost of capital of the selected machine-building enterprises in 2011–2016

Indicators	2011	2012	2013	2014	2015	2016
1	2	3	4	5	6	7
1. Weighted Average Cost of Capital (<i>WACC</i>), %						
– Turboatom PJSC	19.89	14.97	16.96	19.08	22.63	20.01
– NMBP PrJSC	26.89	24.50	25.38	24.02	25.89	24.05
– Dniprovazhmash PJSC	12.30	11.87	10.55	12.03	12.14	9.89
– ZaporizhTransformator PrJSC	10.48	10.83	8.23	10.65	3.79	5.96
– Kryukov Railway Car Building Works PJSC	24.05	21.76	18.99	22.16	20.11	16.69
– Kramatorsk Heavy Duty Machine Tool Building Plant PJSC	13.03	11.45	10.64	1.92	3.08	4.12
– AC Bogdan Motors PJSC	14.23	14.08	13.54	9.74	11.20	12.87
2. Equity share in its total value (r_{aut})						
– Turboatom PJSC	0.66	0.51	0.58	0.64	0.78	0.71
– NMBP PrJSC	0.89	0.83	0.87	0.81	0.90	0.86
– Dniprovazhmash PJSC	0.37	0.35	0.31	0.34	0.33	0.25
– ZaporizhTransformator PrJSC	0.28	0.25	0.10	-	-	-
– Kryukov Railway Car Building Works PJSC	0.79	0.73	0.64	0.73	0.68	0.59
– Kramatorsk Heavy Duty Machine Tool Building Plant PJSC	0.43	0.36	0.32	-	-	-
– AC Bogdan Motors PJSC	0.22	0.18	0.14	-	-	-

Source: Calculated by the author in accordance with [6-10]

These two selected enterprises under consideration were profitable throughout the analysis period, and the negative *ReOI* flows are explained by the high *WACC* values, which is due to the high equity share in its total value. On the one hand, this situation is characterized by a decreased financial risk from the point of view of dependence on external sources of business financing, on the other hand, the degrees of financial leverage are mitigated, and from the perspective of business analysts, negative values of economic profit are fixed.

At Kryukov Railway Car Building Works PJSC, the equity share in its total value is also more than 0.5, and the cost of capital is high correspondingly. However, this fact did not become decisive in determining *ReOI*, as during 2014–2016, the enterprise activity was unprofitable.

The relatively low values of *WACC* during 2014–2016 at ZaporizhTransformator PrJSC, Kramatorsk Heavy Duty Machine Tool Building Plant PJSC, AC Bogdan Motors PJSC are explained by the fact that in this period the values of equity at book value were negative due to accumulation of losses. Therefore, it is pointless to talk about the effectiveness of the policy on rationalization of capital structure at these enterprises.

Regardless of the analytical model that underlies the determination of economic profit, the main cost factors are the spread and sales volume, as well as the size and productivity of operating capital. Positive values of the sales spread are the basis of value added flows to be formed at the enterprise. In accordance with the spread estimation of the selected machine-building enterprises (Table 3), we can point out that the exceeding of the actual profitability of the sales of machine-building products over its critical values is achieved due to absolutely balanced and effective business development in all areas of activity.

Table 3. Indicators that shape the return on equity of the selected machine-building enterprises under consideration in 2011–2016

Indicators	2011	2012	2013	2014	2015	2016
1	2	3	4	5	6	7
1. Product Sales Spread, %						
– Turboatom PJSC	-3.64	-13.54	-2.77	-6.99	20.16	5.40
– NMBP PrJSC	-33.34	-40.85	-32.22	-34.59	-15.80	-31.07
– Dniprovazhmash PJSC	48.63	59.82	-8.50	-7.59	-7.55	-19.22
– ZaporizhTransformator PrJSC	15.67	13.32	9.44	-172.55	-243.67	-41.00
– Kryukov Railway Car Building Works PJSC	-0.16	8.29	-12.90	-38.58	-81.99	-30.56
– Kramatorsk Heavy Duty Machine Tool Building Plant PJSC	-91.83	-33.56	-42.94	-110.86	-49.34	-50.29
– AC Bogdan Motors PJSC	-13.06	-27.94	-72.04	-329.69	-190.89	-118.06
2. Capital productivity, UAH/UAH						
– Turboatom PJSC	0.53	0.40	0.47	0.46	0.56	0.46
– NMBP PrJSC	0.67	0.55	0.62	0.50	0.54	0.52
– Dniprovazhmash PJSC	1.22	1.48	1.22	1.56	1.32	1.15
– ZaporizhTransformator PrJSC	0.95	1.00	0.76	0.38	0.29	0.58
– Kryukov Railway Car Building Works PJSC	2.13	1.86	0.87	0.84	0.41	0.66
– Kramatorsk Heavy Duty Machine Tool Building Plant PJSC	0.09	0.34	0.23	0.30	0.15	0.20
– AC Bogdan Motors PJSC	0.78	0.77	0.25	0.11	0.16	0.17

Source: Calculated by the author in accordance with [6-10]

As an example, consider the situation at ZaporizhTransformator PrJSC and Turboatom PJSC, which belong to unique world-class machine-building enterprises. Thus, the products of ZaporizhTransformator PrJSC are represented in 86 countries of the world, and in 2013, the share of exports in total sales amounted to 86%, while exports to Russia was 55%. As of the end of 2016, the share of exports decreased to 17.3%, which caused a high level of unprofitability against the background of the internal corporate conflict in 2014–2015. Until 2013, the Ukrainian enterprises were recognized leaders of relevant products in the CIS market, while underestimating the competitors, especially Russian enterprises, and focusing not on the highest quality standards of machine-building products of leading manufacturers but on ensuring short-term competitive advantages in the CIS market, were the basis of the destructive processes of value in the face of unforeseen situation related to the consequences of the Russian-Ukrainian political relations.

Motor Sich PJSC is characterized by a rather similar development problem with Turboatom PJSC. During the profitability of the entire period under consideration (2007–2015), the enterprise generated positive flows of business value added only once. The enterprise is export-oriented (in 2015, the share of exports amounted to 93.1%), which is why it depends on the level of development of the world competitor companies. At the same time, given the specificity of the product market (i.e. aviation equipment), we can speak of a normal balancing of the enterprise on the verge of price competitiveness and quality of products compared to similar world manufacturers. In 2015, the level of

compliance of the sales profitability with the critical value is sufficiently high — 0.79 (Table 4.14), and the lack of profitability to cover the cost of capital is explained by the permanent process of increasing the cost of research and development, which is the basis of profitability of this business development.

With no profitability in 2007–2013, Kryukov Railway Car Building Works PJSC has never generated any positive flows of business value added. During 2014–2015, sales volumes of the enterprise decreased significantly, which caused losses. The main reasons can be classified as follows:

– Against the background of the economic crisis in the economies of the CIS countries, where the enterprise products are exported, the budget of social programs is cut (this accordingly influences the demand for social transport), the surplus of freight cars and the excess of production capacities is observed, the capacity of the corresponding product market is narrowed.

– The negative political and economic trends in the relations between Ukraine and Russia caused the suspension of the Certificates for Federal Railway Transport of the Russian Federation on the whole nomenclature of the freight car building products of Ukrainian enterprises and this enterprise. The artificial displacement of Ukrainian manufacturers from the market of Russia, Kazakhstan, Belarus through the suspension of certificates, non-recognition of the certificates of the Technical Regulation of the Customs Union by the Russian Federation became the main reasons for the negative development tendencies of Kryukov Railway Car Building Works PJSC.

– According to the experts of the car-building market, the competitive positions of the enterprise under consideration are as follows: among the 48 car-building and car-repair plants of the CIS countries, in 2015, Kryukov Railway Car Building Works PJSC was ranked 9th, in 2014 — 5th; the capacity of the CIS market for freight cars was 1.67% in 2015, in 2014 — 4.08%; freight car market share among 18 CIS enterprises was 42.73% (ranked first) in 2015, 40.83% in 2014 (ranked first; CIS market share for social transport products in 2015 was 3.7 % (ranked seventh among 11 manufacturers), 7.74% in 2014 (ranked fourth). Given that Kryukov Railway Car Building Works PJSC has a strong technical and technological infrastructure, innovative developments in the field of freight and social cars to ensure economic sustainability, the need for diversification of activity becomes actual, which is caused, first of all, by unfavorable tendencies of the external business environment.

– As of the end of 2016, it was identified that Turboatom PJSC had the absolutely stable economic status; NMBP PrJSC had the normal economic status; Dniprovazhmash PJSC, Kryukov Railway Car Building Works PJSC, AC Bogdan Motors PJSC had the unstable economic status; ZaporizhTransformator PrJSC and Kramatorsk Heavy Duty Machine Tool Building Plant PJSC had the crisis economic status. In general, it should be noted that during 2011–2016, only one enterprise was characterized by a growing trend of cumulative economic performance — Turboatom PJSC, relatively stable dynamics was observed at NMBP PrJSC and AC Bogdan Motors PJSC; downward dynamics was observed at Dniprovazhmash PJSC, Kryukov Railway Car Building Works PJSC, ZaporizhTransformator PrJSC, and Kramatorsk Heavy Duty Machine Tool Building Plant PJSC.

– The activity of all selected machine-building enterprises is featured by the permanence of innovative processes, which can be determined by the main reason for the prospects for the generation of positive value added flows.

Conclusions. Analysis of trends and prerequisites for the development of the domestic machine-building enterprises and assessment of the economic performance during 2011–2016 allow us to make the following meaningful generalizations:

1. In order to assess the cumulative economic performance as a consequence of the adoption and implementation of managerial decisions and on the basis of a generalized indicator of economic status as a form of manifestation of systemic properties of the enterprise, the totality of indicators is substantiated in accordance with the content of factor interpretation of the residual operating income model (*ReOI* model). Analytical innovation is a set of indicators in the projection "Growth", which is determined in accordance with the model of the Golden Rule of Economy, sustainable growth models (*SGR, Sustainable Growth Rate*), models of the value of growth opportunities (*VGO, value of growth opportunities*), which allowed us to take into account the dependence of the change rates of the basic performance *VBM* indicators on different characteristics of the enterprise activity.

2. In accordance with the implementation results of the proposed methodological approach to assessing the cumulative economic performance in the activity of domestic machine-building enterprises, the tendencies of their development, which are generally characterized by downward dynamics, have been revealed. Thus, during 2011–2016, machine-building enterprises generated negative flows of residual operating income, and since 2014, they have generated the negative flows of net profit, which caused the changing of economic status from normal (2011–2013) to unstable (in 2014, 2016) and crisis (2015). The main reasons for the declining tendencies of the cumulative economic performance of the domestic machine-building enterprises were determined: outdated technical infrastructure, wear and tear of which is estimated by specialists at the level of 60–80%, and obsolescence reaches more than 50 years; high share of production mechanization; critically low share of spending on machine-building research and development, which barely reached 0.1% of GDP in Ukraine (the best indicator in the mid-2000s), while the United States spends about 2.0–2.5% of GDP, EU countries spend 3% of GDP. The main reason for the deterioration of the cumulative economic performance dynamics of the domestic machine-building enterprises during 2014–2016 was determined by the high level of dependence of machine-building products sales on the Russian market (in 2012, 52% of machine-building products were exported to Russia), which domestic enterprises began to lose after the beginning of 2014 due to the Russian-Ukrainian political relations.

3. The high level of correlation of the cumulative economic performance of the machine-building enterprises with the level of regional dependence of sales is confirmed by the assessment results of the selected powerful machine-building enterprises. Of course, enterprises with high (more than 50% of sales volume) (NMBP PrJSC,

Dniprovazhmash PJSC, and Kryukov Railway Car Building Works PJSC) and medium (more than 30% of sales volume) (ZaporizhTransformer PrJSC, Kramatorsk Heavy Duty Machine Tool Building Plant PJSC, Automobile Company Bogdan Motors PJSC) level of dependence on the Russian sales market, since 2014, is characterized by a downward dynamics of cumulative economic performance indicators. At the same time, Turboatom PJSC, whose sales volumes are rather diversified from the regional point of view, generated positive value added flows in 2015–2016 and improved the economic status from normal (2011–2014) to absolutely sustainable (2015–2016).

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Стаття надійшла до редакції 20.07.2018 р.