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FUNDAMENTALS OF ANALYTICAL ASSESSMENT OF THE SECONDARY SECTOR OF ECONOMY

Abstract

Current trends in the socio-economic development of the world community have predetermined a close relationship between the parameters of the dynamics of national economies and their structural proportions. Changes in the quantitative proportions and the qualitative state of the world economy as a system determine the trend in the dynamics of the sectoral structure of the national economy. Despite the post-industrial nature of the development of countries with market economies, the source of their structural changes remains domestic economic growth, which is caused by the redistribution of capital and labor in high-tech manufacturing industries. Therefore, the purpose of this study is to formulate a general scheme for the correct assessment of the secondary sector of the Ukrainian economy based on the possibility of using analytical generalizations. The object of research is the structure of the types of activities that form the secondary sector of the national economy. The dynamics of this sector is largely determined by price characteristics. Therefore, in the analysis of reproduction processes, structural proportions associated with different price elasticities are taken into account. Since the basis for the formation of the price of products is the cost of their production, and the quantitative proportions of the economy determine the setting of new strategic goals, the article traces the dynamics of the relationship of zones and states of balanced indicators that reflect the activities of an industrial group as one of the forms of business organization. Reduction of dynamics indicators to one base allows them to be compared at all levels of generalization of data and to track trends that more accurately reflect the real state of the secondary sector of the national economy.

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ОСНОВИ АНАЛІТИЧНОЇ ОЦІНКИ ВТОРИННОГО СЕКТОРУ ЕКОНОМІКИ

Анотація

Сучасні тенденції соціально-економічного розвитку світового співтовариства визначили тісний зв'язок параметрів динаміки національних економік і їх структурних пропорцій. Зміни кількісних пропорцій і якісного стану світової економіки як системи, визначають тренд динаміки секторальної структури національної економіки. Незважаючи на постіндустріальний характер розвитку країн з ринковою економікою, джерелом їх структурних змін залишається внутрішній економічний ріст, який викликаний перерозподілом капіталу і праці в високотехнологічні галузі переробної промисловості. Тому мета даного дослідження - формування загальної схеми коректної оцінки вторинного сектора економіки України виходячи з можливості використання аналітичних узагальнень. Об'єктом дослідження є структура видів діяльності, які формують вторинний сектор національної економіки. Динаміку даного сектора в значній мірі визначають цінові характеристики. Тому при аналізі відтворювальних процесів враховані структурні пропорції, пов'язані з різною ціновою еластичністю. Оскільки основу формування ціни на продукцію становлять витрати на її виробництво, а кількісні пропорції економіки визначають постановку нових стратегічних цілей, в статті досліджено динаміку взаємозв'язку зон і станів збалансованості показників, що відображають діяльність індустріальної групи, як однієї з форм організації бізнесу. Приведення показників динаміки до однієї основи дозволяє провести їх зіставлення на всіх рівнях узагальнення даних і відстежити тенденції, які більш точно відображають реальний стан вторинного сектора національної економіки.

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INTRODUCTION

The economic system of any country is heterogeneous in composition. The heterogeneity of the system is determined by its structure and regularities that this structure reveals. In the study of structural patterns of economic development, the three-sector theory of Fisher and Clark became widespread. The sectoral structure of management is based on the combination of common features that allow the segmentation of the economic system. The essence of the theory of sectoral development is to increase the final product of the economic activity of all sectors of the economy.

Different sectors of the economy make a different contribution to the increase in the country's national product. The predominance of the secondary sector in the economy determines the industrial nature of its development. This sector is characterized by both a decrease in dependence on the conditions of extraction of natural resources and an increase in the importance of industrial innovation and the qualification of labor resources.

Under the prevailing conditions of the development of the world market, the economic growth of the national economies of many countries was determined both by the availability (or receipt) of cheap resources and by the expansion of foreign markets. The consequence of this is the formation of the specifics of the development of national economies. But, at the same time, the specifics of the national economy lead to a limitation of the involvement of national resources in the global economic turnover.

Therefore, the level of socio-economic development of both an individual country and the world economy as a whole determines the development of such managerial actions that, based on the interconnection of indicators characterizing the dynamics of changes in the national economy and its structural proportions, will allow identifying imbalances in the scale of global and national economies to obtain final results.

1. LITERATURE REVIEW

The issues of structural changes in the economy are reflected in the works of Mandibur, Geyts, Kolomoytsev, Khomenko.

Ensuring economic growth and the process of integration into a single global market are factors that determine, in modern economic conditions, long-term trends in economic development. The combined influence of these factors ensures the growth of industrial production. This position is reflected in the works of Stiglitz, Zveryakov (2017), Khojayan, Prushkovskaya (2013).

In countries with a developed system of market relations, the source of structural changes is the growth of the country's economy, which is caused by the redistribution of capital and labor in high-tech industries with higher added value, which increases the level of competitiveness of these countries. Based on the fact that the basic element of reproduction in the economic cycle is the production of goods, the most diversified industry, which contributes to innovative changes in the industry, is engineering.

Such scientists as Bartashevska, Vasyuk, Danylyshyn, Dovgan, Zarichna (2019), Kolisnyk, Lobach, Malashchuk, Sokolova (2019), Tarasova, Chumakova, Shapurov, etc. were engaged in the study of the development of the engineering in Ukraine and its analytical evaluation.

Economic growth in engineering can realize the economies of scale and manage production costs. The cost management process reflects the existence of a common scheme of the relationship of the results of production and economic activity by business entities. The works of domestic scientists are devoted to these issues: Butynets, Golov, Mnykh, Savchenko, Sopka, Chumachenko, Zborovska, Lebedev, Partyna, Pylypenko, Tsymbalyuk are devoted to these issues. Cherep, Bocharova, Lotova, Hovhannisyan, Svystun (2017), Stoyanova, Chuchulin, Shevtsiv (2016), as well as foreign scientists: Britton, Rain, Skown, Holt, Horngren, Foster.

Despite the sufficient level of a solution to these issues, the existing system of analytical assessment of the secondary sector of the economy in the conditions of development of the engineering industry needs further elaboration taking into account the requirements of today.

2. AIMS

Aims to form a general algorithm for the study of the secondary sector of the economy under the conditions of compliance with the rules of analytical generalizations.

3. METHODS

The theoretical and methodological basis of the study was the fundamental provisions of systems theory, sectoral development theory, and probability theory, research of domestic and foreign scientists on the analysis of the sectoral structure of the economy.

To achieve the goal set in the work, the following general and special scientific methods were used: methods of analytical generalizations - for structuring and systematization of theoretical and practical material; economic and statistical methods - to determine trends in the development of engineering enterprises; probability theory - to study the states of the balance system of balanced indicators; method of analysis of hierarchies - for comparative analysis and formation of the general block of indicators on components of system of the balanced indicators; rationing - to bring all indicators to one dimension; data visualization - for a visual representation of the results.

4. RESULTS

The unevenness of the economic development of countries and the effectiveness of their integration into world space are determined by the modern theory of global transformations (Khodzhayan, 2008). The interdependence of economic growth and structural transformations is a complex process that can only be tracked in dynamics and implemented through the interconnection of structural elements of the system. The form of arrangement of elements of the system with a certain independence and the ability to self-regulation, defines the concept of structure. Then, given the specifics of the development of the national economy, the structure acts as both a result and a prerequisite for economic growth, and transformation reflects the regularities of changes in the economy.

The sectoral structure of the economy is not static. It involves the relationship of each subsequent sector with the previous one. Moreover, to obtain the final result, each sector works at the expense of the previous one. The absence of this relationship or the exclusion of any of the sectors leads to a decrease in the importance of the national economy and the loss of its competitiveness.

The existing unevenness and multidirectional change in the sectoral structure of the economy of Ukraine are consistent with global trends. The global transformation of the world economy has led to a rethinking of the role of industry in the structure of the national economy because, in the reproduction process, most states use the production of goods as a criterion of economic dynamics. "Strengthening the dependence of the country's economy on the external conjuncture, slow improvement of reproduction proportions in the structure of the industry, insufficient differentiation of production, low adaptability to changing the structure of the needs of the domestic market and an insignificant share of high-tech industries" (Prushkovskaya, 2013) determine the current state of national industry.

In the study of the sectoral structure of the national economy, the industry remains the dominant component of the secondary sector.

Let's consider the dynamics of structural changes by sectors of the economy of Ukraine for 2012–2018. This period is of interest from the standpoint of periodization of time series (State Statistics Service of Ukraine, n.d.), built taking into account the cyclical dynamics of socio-economic processes both in the world and in the national economy. To simultaneously monitor the dynamics of existing processes and achieve comparability of the studied indicators, we use 2012 as a comparison base.

The sectoral structure of the national economy reflects both the quantitative proportions of the development of the market structure of the economy and the qualitative characteristics of its changes. Based on the fact that the number and size of enterprises, initially determines the quantitative characteristics of economic development, and the qualitative changes include patterns of structural changes, we will conduct a comparative analysis of macroeconomic indicators characterizing the general state of the economy based on that the main source of GDP growth - the resulting added-value.

The main reason for the change in the share of industrial production in GDP is the determination of value-added by costs. Let's track the dynamics of structural changes in this indicator by sectors of the economy (Table 1).

Table 1. Dynamics of structural shifts in the Ukrainian economy by sectors of the economy

Source: Calculated by the authors (State Statistics Service of Ukraine, n.d.).

Period	Characteristics of the dynamics of the share of value-added cost by sectors of the economy			
	Deviation, %		Leading coefficient, times	
	Deviation by sectors of the economy			
	secondary - primary	secondary - tertiary	secondary - primary	secondary - tertiary
2012	+16.1	−15.0	–	–
2013	+13.8	−18.1	1.086	1.081
2014	+16.2	−13.9	1.006	1.029
2015	+13.0	−13.4	1.165	1.029
2016	+11.1	−16.3	1.241	1.047
2017	+12.0	−17.8	1.182	1.083
2018	+11.0	−20.4	1.219	1.159

Analysis of the basic characteristics of the dynamics showed that for the study period, the share of value-added by costs in the secondary sector of the Ukrainian economy has an ambiguous outstripping trend compared to the corresponding indicator of the primary sector. Concerning the tertiary sector of the economy, a similar but inverse trend is observed. Nevertheless, the ratio of the share of value-added to costs in the secondary sector of the economy compared with the primary is characterized by a decrease in the speed of this indicator by an average of 4.53%. The ratio of the relative characteristics of the dynamics by sectors of the economy allowed us to conclude that, concerning both the primary and tertiary sectors, the secondary sector is characterized by ambiguous dynamics. Thus, the growth rate of the share of value-added costs in the secondary sector was ahead of the corresponding indicator of the primary sector for the period from 2014 to 2016. The leading coefficient for this period had a steady trend from 1.006 times to 1.241 times, respectively. Outrunning of the secondary sector over the tertiary sector in the considered indicator took place in 2014 and 2015 by 1.029 times, respectively. The presented dynamics of the value-added indicator testifies to the process of de-industrialization of the Ukrainian economy, but so far, at its relative level.

The considered relationships give a general description of the development of the national economy and do not fully reflect the structural proportions. For quantitative and qualitative analysis, it is of interest to consider the contribution of manufacturing to the secondary sector of the economy according to the indicators discussed above.

Based on the fact that the market structure is quantitatively described by the number and size of the enterprise, and value-added is considered as an indicator characterizing current trends in the development of the economy, let's consider the characteristics of the dynamics of these indicators in the manufacturing, as the main activity of the secondary sector of the economy (Table 2).

Table 2. Dynamics of structural shifts in the manufacturing of Ukraine

Period	Characteristics of the dynamics of indicators in the manufacturing industry				Leading coefficient, times
	Deviation, %		The growth rate (decline), %		
	specific gravity				
	business entities	value-added	business entities	value-added	
2012	-	-	100	100	-
2013	+0.08	−3.27	100.12	94.94	1.05
2014	+2.69	+0.85	104.14	101.30	1.03
2015	+2.02	+4.16	103.10	106.43	1.03
2016	+2.48	−2.42	103.82	96.25	1.08
2017	+1.57	+2.99	102.41	104.62	1.02
2018	+0.65	+3.71	101.00	105.74	1.05

Based on the analysis of Table 2, the share of business entities of manufacturing industries in the secondary sector of the economy, as well as the value-added indicator for the study period did not change significantly. Their variation was 2.69% and 6.98%, respectively. The specific gravity of the business entities has unstable, but positive dynamics, then the specific gravity of value-added has changed ambiguously over the entire period of the study. So, in 2013 and 2016, this indicator decreased by 3.27% and 2.42% compared to 2012, respectively, and in 2017 and 2018 there is an increase in the share of value-added by 2.99% and 3.71%. The use of the relative characteristics of the dynamics confirms the unstable and ambiguous trend over the years in outstripping the growth rates of these indicators. Nevertheless, the growth rate of the share of value-added outstripped the growth rates of the share of business entities in 2015 and for 2017 and 2018 by 1.03 and, –1.02 and 1.05 times, respectively. This situation indicates that despite the structural redistribution between sectors of the economy, the importance of manufacturing in the development of the secondary sector of the economy remains.

The noted trends in the value-added indicator in the manufacturing also confirm the process of de-industrialization of the national economy. The relative nature of existing trends is also evidenced by a slight variation in the indicator of the volume of sales (Figure 1).
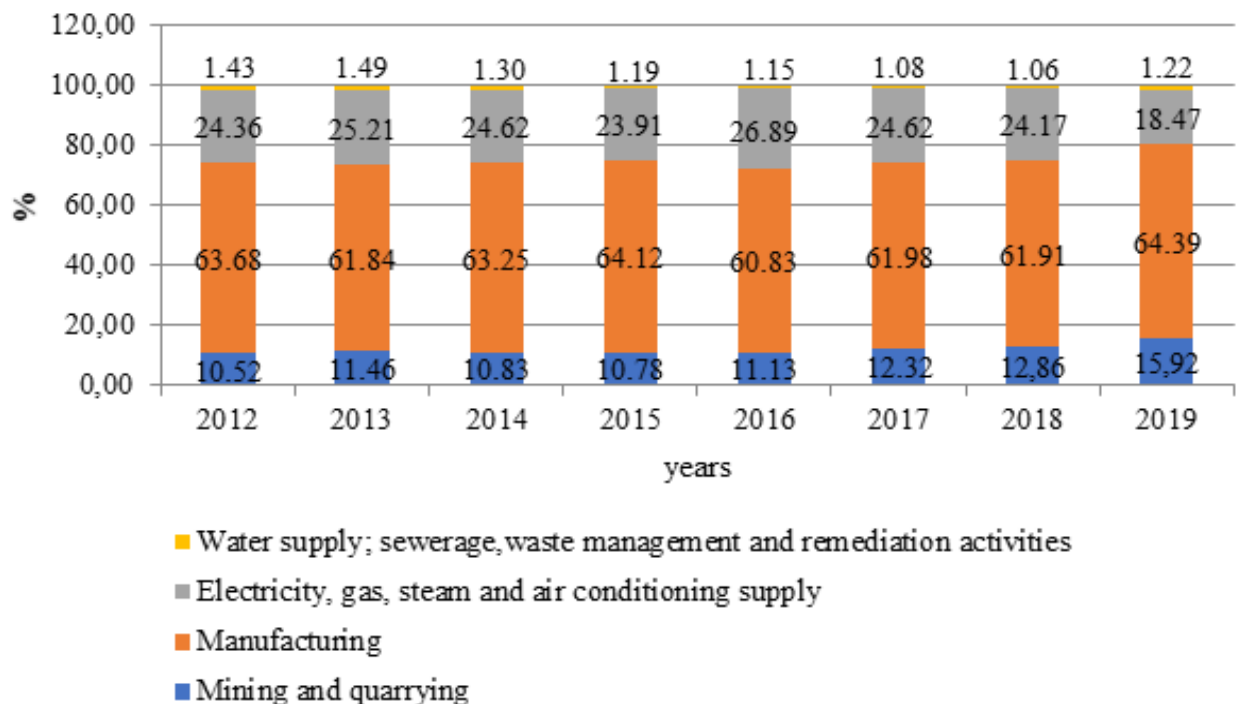
Figure 1. Dynamics of the structure of the volume of industrial products sold by types of activity in Ukraine, %

Based on the fact that the material basis of the economic cycle in a market economy is determined by the production of goods in kind and value terms, and the different sides of the market and the dynamics of macroeconomic indicators are reflected by the state pricing policy, it is advisable to conduct a comparative analysis of the producer price index of industrial products and the index of industrial production (Table 3).

Table 3. Dynamics of basic price characteristics for the industry of Ukraine

Period	Characteristics of dynamics			
	By industry		By manufacturing	
	Industrial production index	Industrial producer price index	Industrial production index	Industrial producer price index
2012	–	–	–	–
2013	88.40	96.34	84.60	98.02
2014	79.41	112.92	76.70	116.80
2015	69.80	131.15	66.73	135.08
2016	72.52	116.20	70.40	113.14
2017	72.50	121.89	74.00	120.45
2018	74.71	113.21	76.31	111.66
2019	74.32	100.39	79.70	98.81

As can be seen from Table 3 during the study period, the growth rate of the producer price index was ahead of the growth rate of the industrial production index both as a whole and in the manufacturing industry. If for the period from 2012 to 2016 the rate of change of this ratio was higher for the manufacturing, then from 2017 - for the industry as a whole. It is an interesting fact that 2016 is the year with the lowest specific gravity (60.83%) of the share of manufacturing in total industrial production, and almost the same values of the above indicators. That is, in general, it can be argued that 2016 reflects the real state of the manufacturing, taking into account the impact of prices. The analysis of the ratio of leading coefficients of price characteristics showed that the speed of leading of prices in comparison with production output for the period from 2012 to 2016 on the industry was ahead of the corresponding indicator on the manufacturing in the range from 1.064 to 1.074 times. Whereas since 2017, there has been a reverse trend in the ratio of these indicators, the range of change of which varied from 1.03 times in 2017 to 1.09 times in 2019 (Figure 2).
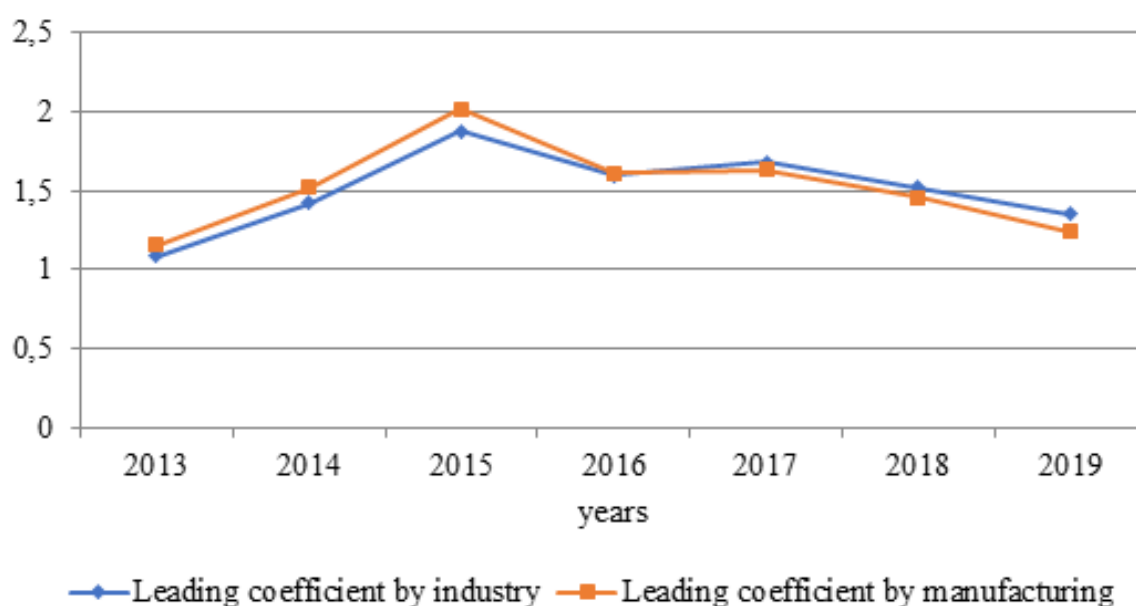
Figure 2. Dynamics of the ratio of leading coefficients of price characteristics in the industry of Ukraine

Since value indicators are formed as the product of quantity and price, and in analytical practice, it is important to highlight the impact of each factor on the final result, let's will conduct a comparative analysis of the dynamics of output and sales, as well as the producer price index and value-added growth in manufacturing. The analysis (Figure 1-2, Table 2-3) showed that for the entire period of the study, the rate of change of the industrial production index is higher than the rate of change of the share of manufacturing enterprises. This is a positive, though not unambiguous in time, moment in assessing the development of this activity. The minimum value of this indicator was observed in 2013 and was 1.18 times, the maximum - in 2015 (1.46 times). The rate of change in the index of industrial production was clearly, albeit slightly, higher than the rate of change in the share of sold products. It can be stated that the manufactured products found their consumer. Throughout the study period, the rate of change of the producer price index was higher than the rate of change in the share of value-added, which once again confirms the effect of price variation on indicators characterizing the level of development of this activity.

The most progressive structuring industry in the manufacturing is engineering. Since engineering determines the possibility of implementing an innovative component in the value-added of goods and services, consider the characteristics of its dynamics (Table 4).

Table 4. Dynamics of relative characteristics of engineering development in Ukraine

Source: Calculated by the authors (State Statistics Service of Ukraine, n.d.).

| Period	The volume of engineering products in the total volume of manufacturing, %		The growth rate of the volume of industrial products sold in engineering, %	Leading coefficient, times
	specific gravity	growth rates		
2012	16.13	–	–	–
2013	13.93	86.36	81.16	1.06
2014	11.28	69.93	72.52	1.04
2015	10.12	62.74	82.02	1.31
2016	10.01	62.06	93.47	1.51
2017	10.34	64.10	119.75	1.87
2018	11.07	68.63	148.49	2.16
2019	11.77	72.97	133.83	1.83

Analysis of Table 4 indicates a reduction until 2017 of the share of engineering products in the total volume of manufacturing products in Ukraine. But, since 2018, there has been an increase in this indicator by 5.6%. A comparative analysis of the growth rate of the share of engineering products with the growth rate of sales in this industry showed outstripping growth trends of the latter indicator. Despite the decrease in the specific gravity of engineering products compared with 2012, the growth rate of the volume of industrial products sold in engineering is ahead of its specific gravity in the range from 1.04 to 2.16 times. This fact confirms that the development of engineering, even at its existing pace, remains in demand in the structure of the national economy.

A comparative analysis of the dynamics of the volume of industrial products sold by types of activity is presented in Figure 3.

In the context of globalization, the economic limit for achieving the growth of the national economy is obtaining superprofits. One of the options for diversifying sources of profit, concentrating financial resources on the most necessary areas, increasing management mobility is to create modern forms of business organization - financial and industrial group.

In the Kharkiv region, the industrial group "Ukrainian Industrial Energy Company" (UPEC) was created.

UPEC is a holding-type structure that unites several engineering enterprises: Kharkiv Machine-Tool Building Plant, PJSC (Kharverst, PJSC); The Kharkov Electrical Engineering Plant "Ukrelectromash" (HELZ); Kharkov Bearing Plant (HARP); Lozova Forging-Mechanical Plant (LKMZ); The Ukrainian Casting Company (ULK).
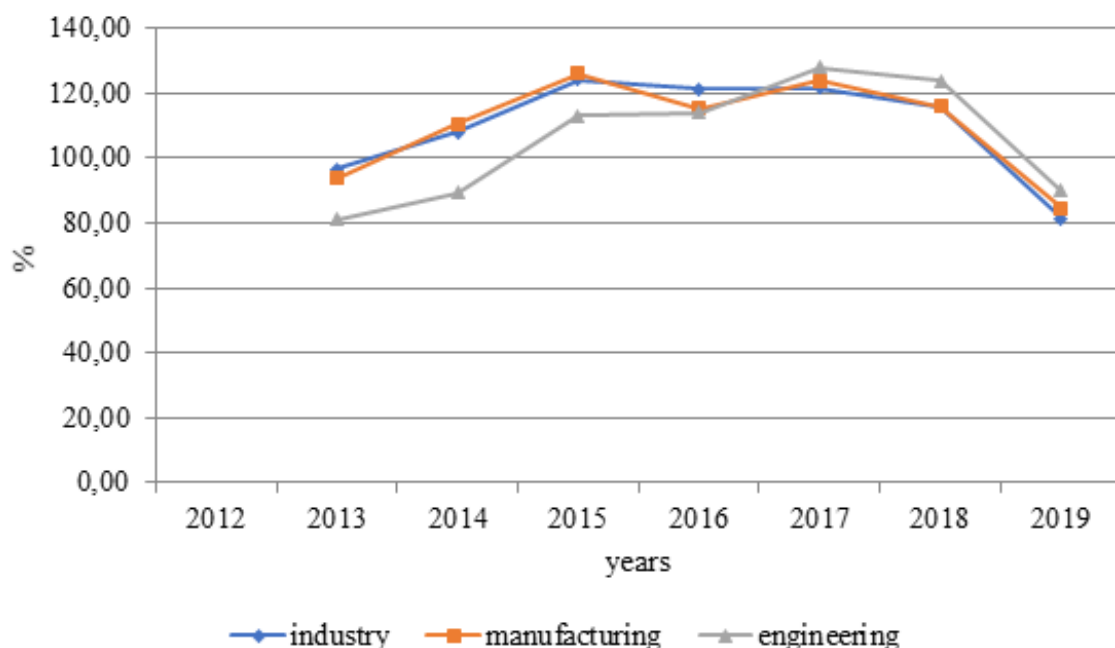
Source: Authors.

Figure 3. Dynamics of structural characteristics of the volume of industrial products sold, by Ukraine's industry

Distinctive features of this industrial group are that: the activities of all enterprises are associated with engineering and metalworking; they have various areas of production activity, producing mass, serial and unique (one-time) products, and also provide production services; belong to the category of medium and large enterprises.

Let's analyze the activities of UPEC for the previously allocated period. To take into account the influence of price characteristics when comparing the dynamics of cost and consumer value of manufactured products, we will conduct a comparative analysis of the growth rate of the volume of products sold by UPEC with the growth rate of the producer price index of engineering products (Table 5).

Table 5. The dynamics of the comparative assessment of UPEC

Source: Calculated by the authors (State Statistics Service of Ukraine, n.d.).

Period	The growth rates, %		Leading coefficient, times
	The producer price index of engineering products	the volume of products sold by UPEC	
2012	–	–	–
2013	107.91	60.00	1.80
2014	116.02	35.07	3.31
2015	119.92	50.02	2.40
2016	110.06	70.26	1.57
2017	110.45	101.12	1.09
2018	113.38	106.49	1.06
2019	100.29	67.04	1.50

Analysis of Table 5 showed an unambiguous leading the growth rate of the producer price index of engineering products compared with the volume of products sold by UPEC. However, the speed of price changes does not provide a high level of competitiveness of products. The presented situation is more legitimate in reflecting the real state of the development of engineering.

The lower price limit is production costs. The determination of the relationship between costs and the result of economic activity reveals a regularity that will ensure both the stability of the system at any level and stimulate a change in its structure. Based on this, let's consider the activities of UPEC from the standpoint of effective cost management.

The effectiveness of the management process is determined by the current system of interrelated or coordinated indicators that are aimed at obtaining a greater final result with a possible minimization of costs. The use of a balanced scorecard (BS) as an analytical base (Naumova, 2011) made it possible to determine the coherence of zones and the state of balance to form a cost management strategy. Based on the practical experience of experts, consistency of the essence of the problem and the variant of the requirement for its solution was achieved: achieving more efficient development of enterprises based on cost analysis by the components of the BS. The normalization process allowed us to combine indicators on the components of the BS into zones (negative zone: 0 - 0.33; neutral: 0.33 –0.67; positive: 0.67-1) and to trace the relationship of zones and states (Table 6).

Table 6. Dynamics of integral indicators for the components of BS UPEK

Source: Calculated by the authors.

The components of BS	Period	Enterprise				
		Kharverst, PJSC	HELZ	HARP	LKMZ	ULK
Financial	2012	0.30	0.38	0.35	0.23	0.39
	2019	0.33	0.23	0.3	0.18	0.33
Marketing	2012	0.33	0.32	0.39	0.38	0.40
	2019	0.33	0.30	0.29	0.33	0.34
Strategic decisions	2012	0.30	0.29	0.50	0.48	0.49
	2019	0.30	0.25	0.30	0.3	0.4
Innovation and investment	2012	0.15	0.18	0.16	0.17	0.10
	2019	0.15	0.13	0.15	0.14	0.10
The state of the enterprise	2012	Unbalanced negative	Unbalanced negative	Unbalanced neutral	Unbalanced neutral	Unbalanced neutral
	2019	Unbalanced neutral	Balanced negative	Balanced negative	Unbalanced negative	Unbalanced neutral

Based on the data table 6 it follows that in 2019, the BS of UPEC enterprises changed its condition for the worse for all enterprises except Kharverst and ULK. In 2019, the BS of the ULK enterprise remained in the same zone and condition as in 2012, but the integral indicators decreased in terms of the components of the system. BS of the Kharverst enterprise moved from a negative zone to a neutral one, while maintaining a state of imbalance. The transition to the neutral zone was facilitated by an increase in the integrated indicator for the financial component.

HELZ and HARP enterprises have reached a balanced scorecard, however, for all the components of the system, the indicators are in the negative zone, which indicates a deterioration in their financial condition.

As an element of managerial decision making, contributing to the improvement of the financial and economic situation of enterprises, the possible options for transition indicators from one zone to another were considered.

For Kharverst, it is advisable to leave the BS similar to the state of 2012. To ensure a way out of the negative zone in terms of the constituent elements of strategic decisions and innovation and investment, it is necessary to develop a strategy for the development of production activities taking into account the possibility of increasing own financial resources, primarily by reducing the rate of increase in production costs and expanding sales markets.

It is advisable for HELZ and HARP enterprises in this situation to focus their efforts on developing a strategy aimed at transition indicators from the negative zone to the neutral one to stabilize their activities. A significant drop in sales volumes was associated with filling the market niche with cheaper and, at the same time, lower-quality foreign goods. Under the current conditions, a way out can be found by revising the range of products, reducing the rate of increase in production costs, and finding new markets. A negative development option is the liquidation of enterprises.

The decrease in the integral indicator for the component of strategic decisions of the BS facilitated the transition in 2019 of LKMZ enterprises from the neutral zone to the negative. A return to the neutral zone is possible: by expanding the effectiveness of motivational measures, which will increase the component of strategic decisions; decrease in the growth rate of production costs, which will positively affect both the financial and innovation-investment component.

UPEC enterprises are the main consumers of ULK products. Thus, the deterioration in the overall financial condition of UPEC enterprises directly affects the corresponding integral characteristics of the ULK. Under the current conditions, it is not possible to change the state of the BS of the ULK.

5. DISCUSSION

The main goal of the analytical work is to obtain accurate and comparable data. Even within the same sector of the economy, diverse information on qualitative characteristics is used, which forms a system of indicators. From an economic point of view, a comparative analysis of indicators is possible in terms of value. But cost implies the influence of prices on the final result of economic activity. To eliminate the influence of prices, it is necessary to use constant prices. But their use is possible if, over some time, the same product is considered, the quality and price of which remains constant. At the same time, for unstable economies, the chain method is mainly used when tracking the price characteristics of macroeconomic dynamics. It assumes the existence of different periods and different count basis in time for comparative analysis.

Comparison of price indices by aggregated levels is possible under the following conditions (Yeliseyeva, 2020):

- absence of structural shifts within the product group in the period that is selected for comparison;
- absence of errors in the calculation of price indices for previous periods.

Fulfillment of even these basic conditions is not real in practice. The ability to carry out a comparative analysis gives the reduction of indicators to one basis. The obtained characteristics of the indicators are the basis both for the formation of correct conclusions and for making informed management decisions.

CONCLUSION

The stages of development and the quality of the economic system are determined by the proportions between its elements. Analysis of the structure of the national economy, carried out through the ratio of the individual elements of the subsystem, reveals the qualitative characteristics of these proportions, and the assessment of structural shifts - the features of changes in proportions in dynamics.

The correctness of the analytical assessment of the relationship between the individual subsystems is achieved by the availability of comparable information. Comparability should be understood as the unambiguity of the information source, the time base of comparison, and the system of estimated characteristics.

So, the use of data only from the statistical service of Ukraine made it possible to achieve unambiguity of multi-level assessments of the study through the relationship: the secondary sector of economy - manufacturing industry - mechanical engineering - a form of business organization in mechanical engineering.

The emphasis on cost indicators in assessing this relationship rightly determined their attribution to the main reason for the change in the share of production of a product produced.

Considering the price as the lower limit of production costs and as a tool to influence its result was the basis for choosing a method for effective cost management.

Consideration of the BS as an analytical base made it possible to identify options for the consistency of zones and states of balance in order to form a cost management strategy at machine-building enterprises.

The presence of inconsistency in the collection, processing and subsequent aggregation of indicators reduces the accuracy of the research and, as a result, the formation of conclusions that reflect the real situation.

It is possible to achieve comparability of information in the most general approximation on conditions that the indicators under consideration are reduced to one basis. This approach is a prerequisite for analytical assessment. It will allow to compare the indicators characterizing the activities of an enterprise as an information base for assessing the structural proportions at a higher level of aggregation.

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