

**ANALYSIS OF STRATEGIC DEVELOPMENT OF THE ENTERPRISE WHICH PROVIDES THE AGRO-INDUSTRIAL COMPLEX WITH EQUIPMENT BY THE CASE OF JSC «KHARKIV TRACTOR PLANT»****Kyshnir S.O., Shaitanov O.M.***Zaporizhzhia National University  
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**Key words:**

development strategy, efficiency, SWOT-analysis, PEST-analysis, updating, bankruptcy, restructuring, Taffler model

The importance of enterprise development strategy formation has been imposed. The main objective of SWOT-analysis is to find out the competitive advantages of machine-building enterprise as a part of development strategy in a particular market situation. The efficiency of development strategy of JSC «Kharkiv Tractor Plant» considering crisis of 2016, judicial cases and updating procedures were analysed. To determine the internal strengths, weaknesses as well as opportunities and threats of JSC «Kharkiv Tractor Plant» the SWOT matrix has been built. The influence of macroenvironment factors on JSC «Kharkiv Tractor Plant» activity using PEST – analysis has been discussed. The diagram of interconnection of production output, product cost and profit on the sales relation of JSC «Kharkiv Tractor Plant» during 2014-2018 was built. The factors which affect the obtained results in the last two years were determined. The efficiency of development strategy and long-term perspectives of JSC «Kharkiv Tractor Plant» using Taffler model has been analysed, i.e. based on financial indices the probability of bankruptcy has been defined.

**АНАЛІЗ СТРАТЕГІЧНОГО РОЗВИТКУ ПІДПРИЄМСТВА, ЩО ЗАБЕЗПЕЧУЄ АПК СІЛЬГОСПТЕХНІКОЮ, НА ПРИКЛАДІ ПАТ «ХАРКІВСЬКИЙ ТРАКТОРНИЙ ЗАВОД»****Кушнір С.О., Шайтанов О.М.***Запорізький національний університет  
Україна, 69600, м. Запоріжжя, вул. Жуковського, 66***Ключові слова:**

стратегія розвитку, ефективність, SWOT-аналіз, PEST-аналіз, санація, банкрутство, реструктуризація, модель Тафлера.

Установлено важливість формування стратегії розвитку підприємства. Досліджено, що основною метою проведення SWOT-аналізу є виявлення конкурентних переваг машинобудівного підприємства в межах стратегії розвитку в конкретній ринковій ситуації. Проаналізовано ефективність стратегії розвитку на прикладі ПАТ «Харківський тракторний завод», зважаючи на кризу 2016 року, судові справи та процедуру санації. Для виявлення внутрішніх сильних та слабких сторін та зовнішніх загроз і можливостей ПАТ «ХТЗ» побудовано матрицю SWOT. Розглянуто вплив чинників макросередовища на діяльність ПАТ «Харківський тракторний завод» за допомогою PEST - аналізу. Побудовано графік взаємозв'язку співвідношення обсягів випуску продукції, собівартості та виручки від реалізації ПАТ «ХТЗ» у 2014-2018 рр. Визначено чинники, які вплинули на отримані результати протягом останніх двох років. Проаналізовано ефективність стратегії розвитку та довгострокові перспективи ПАТ «ХТЗ» із використанням моделі Тафлера, тобто на основі його фінансових показників визначено наближеність підприємства до банкрутства.

**Statement of the problem**

Business development and possibility of implementing the entrepreneurial initiative are the necessary conditions of successful development of Ukraine. The positive dynamics of enterprises development leads to the emergence of new workplaces, replenishment of the budget by increasing the amount of deductions and taxes, increasing flow of consumable commodities and export operations and creates a healthy competitive environment.

Development of agricultural industry is impossible without promotion of related sectors of national

economy, in particular those entities that provide agriculture with machinery.

The industrial enterprises' management system is faced with tasks of effective strategy forming, aimed at the development under revitalizing economic relations and increasing of competition for consumer and investor. In the contemporary context the effective business is impossible without optimal constructed enterprises development strategy.

**Analysis of recent studies and publications**

Innovative activity of machine-building enterprises investigation directly based on realization of detected

strategic development capacities, have been reviewed in works of M. G. Saenko [1], I. Ansoff [2], L. V. Balabanova [3], N. Bryukhovetska, D. Krisanov and others. Business-processes econometric modelling problems estimation and models of economic growth construction methods could be traced to P. Drucker [4], H. Mintzberg, J. Lempel [5], J. Baumol, T. S. Koopmans, P. A. Samuelson, R. Solow. However, a number of issues, among which strategy efficiency investigation in current crisis conditions require further research.

### Objectives of the article

The purpose of the article is to analyse the efficiency of enterprise development strategy and its improvement directions of JSC «Kharkiv Tractor Plant».

### The main material of the research

Enterprises in a tough competition and volatile situation should not only focus on internal affairs, but also should develop long-term strategies, that would allow them to have time for changes in their environment.

The strategy helps to focus on the main problems and to drop the minor ones. Each organization develops according to a certain strategy, or, according to P. Drucker «acts on the basis of its business theory» [4], i.e. makes a choice that largely determines its path.

Traditionally the enterprise strategy efficiency estimation is based on financial reporting. But such a method has several drawbacks in strategic management, among them are the following:

- lack of non-financial indicators;
- weak linkages to strategic planning;
- strong focus on past performance;
- displays the status only for the current time;
- focused on certain representatives of the external and internal environment (owners and business-administration).

The estimation of internal environment, its strengths, weaknesses as well as external opportunities and threats commonly referred to as SWOT-analysis.

Estimation of strong (S – Strength) and weak (W – Weakness) enterprise features regarding opportunities (O – Opportunities) and Threats (T) of external market environment at the time of the SWOT-analysis allows to define strategic prospects of development of the enterprise as a whole [6, p. 43].

Let's analyse the development strategy efficiency of JSC «Kharkiv Tractor Plant» which is the largest enterprise in production general purpose tracked and wheeled agricultural tractors [7].

The plant with almost a hundred years history during 1994 – 2016 passed through several crisis moments,

standing idle, lack of financing, etc. In 2016 the controlling interest was bought by Ukrainian businessman O. Yaroslavskiy, the management was changed and since 2017 the production has slowly begun to recover.

Despite the fact that during the reporting period the economic activity of the enterprise was unprofitable – according to the result of 2018, JSC «Kharkiv Tractor Plant» the plant recognized net losses in the amount 81 380 thsd. UAH, and, as of 31.12.2017, has uncovered losses, the existence of the above-mentioned events, according to the management staff assessment, is not decisive for enterprise economic activity [8].

According to the results of the development strategy adopted by the new management, the enterprise operational activity is profitable, the reason for the loss in 2018 was a revaluation of the debt on updating.

Management staff have no intention of either liquidation or termination of enterprise but only strategic plans of continuation of an economic activity and development in the future.

The enterprise carries out the procedure of pre-trial rehabilitation before proceedings in the bankruptcy case in accordance with Plans of pre-trial rehabilitation, approved by the relevant Decisions of the economic court of Kharkiv region of 26.07.2017 (Case № 922/2334/17) and of 10.01.2019 (Case 922/3733/18). The purpose of Plan of pre-trial rehabilitation is to restore the solvency of the enterprise and prevent bankruptcy, i.e. the activities envisaged by this Plan of pre-trial rehabilitation regarding restoration of the enterprise solvency will ensure the improvement of the financial and economic situation [9].

To identify strengths and weaknesses, external threats and opportunities of JSC «Kharkiv Tractor Plant» let's build a SWOT matrix.

SWOT-analysis looks like strategy balance formation: Strengths correspond to the company's assets are competitive, and its weaknesses correspond to liabilities. that is, how strong sides (assets) overlap its weak sides (liabilities), and also how to leverage strengths and tip strategic balance toward assets.

A successful strategy must addressing the weaknesses that make a company vulnerable, hinder its operations and prevent it from being used the attractive opportunities.

A measure of efficiency is understood as a numerical characteristic which allows to estimate the extent to which the stated objectives had been achieved. In practice, it is always difficult to select an indicator of efficiency.

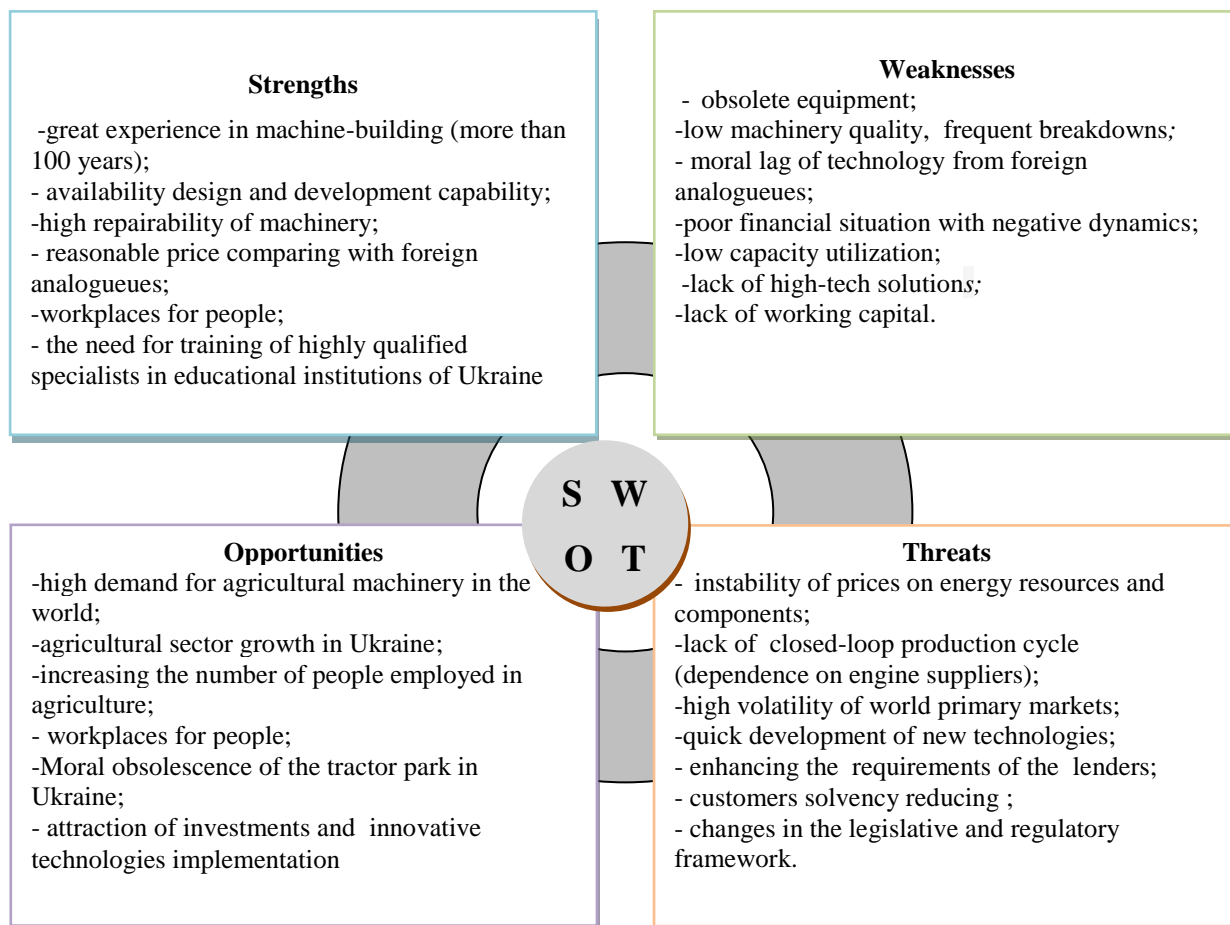


Fig.1. SWOT-analysis of JSC «Kharkiv Tractor Plant»

In turn, the effectiveness of the enterprise development strategy is proposed to be evaluated by using such criterion as effective management of financial resources, correspondence of financial actions to the economic state, definitions of threats.

Low scientific and innervational potential, the lack of highly-skilled personnel that would contribute to development and implementation of innovative processes and insufficient quantity and variety of financing sources

that constrain the strategic development of JSC «Kharkiv Tractor Plant».

Let’s discuss the influence of different macroenvironment factors on activity JSC «Kharkiv Tractor Plant» using PEST – analysis (Tab.1).

PEST-analysis allows to find out Policy, Economy, Society and Technology aspects of environment that affect on machine-building branch strategy development.

Table 1 – PEST - analysis of JSC «Kharkiv Tractor Plant»

POLITICAL AND LEGISLATIVE	ECONOMIC
1. Unstable currency rate. 2. Ambiguous tax legislation. 3. High custom levies. 4. Political situation in country. 5. Threats to national security. 6. Changes in the legislative and regulatory framework. 7. State policy in the machine-building industry.	1. High inflation ratio. 2. High energy tariffs. 3. Increase in prices for materials and products. 4. Economic crisis, which has affected the solvency of customers. 5. Lack of economic, political and legislative support of the domestic producer. 6. Low prices of agricultural products on world markets. 7. Instability, of credit conditions, high credit rates, unreliability of banks. 8. Currency risks 9. High tax rate.
SOCIAL	TECHNOLOGY
1. Considerable migration of highly-skilled personnel 2. Small segment of solvent customers	1. Low state support of innovations. 2. Innovation implementation for own money. 3. Lack of external investments.

In our opinion the enterprise needs to radically revise the investment in new technology implementation and tractor model improvements to the level of competitive in the world market as well as in marketing and human resource policies. Under favourable conditions of the external environment and by forming sufficient investment potential, JSC «Kharkiv Tractor Plant» would

succeed to realize any innovative development strategy and to attract the required investment.

Let's analyse the strategic development of JSC «Kharkiv Tractor Plant» by investigation of interconnection of production output, product cost and profit on sales relation (Tab. 2).

Table 2 – Interconnection of production output, product cost and profit on sales relation of JSC «Kharkiv Tractor Plant»

Indicators	Period				
	2014	2015	2016	2017	2018
Product cost, thsd. UAH	623 605	578204	236 073	585 324	573 680
Profit on sales	674 049	513 280	222845	713342	623612
Production output, units	1455	1600	-	794	900

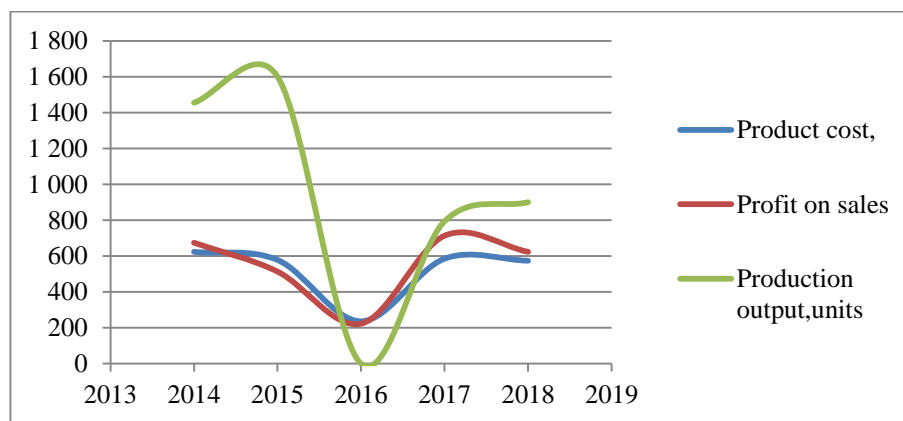


Fig.2. Interconnection of production output, product cost and profit on sales relation of JSC «Kharkiv Tractor Plant»

It could be seen from fig. 2, that 2016 was a crisis year, but production revitalizing in 2017 leads to increasing of production output and profit on sales with reducing the product cost.

Cost reducing while expanding production can be attributed to these factors:

- a) enterprise management and strategy changes;
- b) economies of scale;
- c) technological changes (while expanding production);
- d) better industrial engineering;
- e) improvement of production quality;
- f) introduction into the new markets.

Considering positive changes during 2017-2019, let's analyse efficiency of development strategy and low-term perspectives of JSC «Kharkiv Tractor Plant» using

Taffler model, i.e method of probable bankruptcy forecasting based on financial indices. Taffler model is like this:

$$Z = 0,53X1 + 0,13X2 + 0,18X3 + 0,16X4, \quad (1)$$

where X1 — profit on sales / current liabilities;

X2 — working capital / liabilities;

X3 — current liabilities / balance currency;

X4 — product proceeds / balance currency.

According to normative value, if the value of Z-score is greater than 0,3, it indicates that the enterprise has good long-term prospects. If the Taffler number is less than 0,2, the enterprise is likely to go bankrupt.

The advantage of this method is the simplicity of calculations and the possibility of application during an external screening.

Table 3 – Compounds calculation of JSC «Kharkiv Tractor Plant» model in 2014-2018

$X1_{2014} — 38\ 197 / 478041 = 0,08$	$X2_{2014} — 204\ 809 / 538503 = 0,38$
$X1_{2015} — (359237) / 629319 = -0,571$	$X2_{2015} — 143141 / 824420 = 0,174$
$X1_{2016} — (217660) / 1314939 = -0,1655$	$X2_{2016} — 148562 / 1521437 = 0,098$
$X1_{2017} — 47916 / 281925 = 0,2189$	$X2_{2017} — 318496 / 1495136 = 0,213$
$X1_{2018} — (6924) / 1473539 = -0,005$	$X2_{2018} — 526701 / 1658519 = 0,318$
$X3_{2014} — 478041 / 690421 = 0,692$	$X4_{2014} — 674\ 049 / 690421 = 0,976$
$X3_{2015} — 629319 / 1049844 = 0,5994$	$X4_{2015} — 513\ 280 / 1049844 = 0,049$
$X3_{2016} — 1314939 / 1075079 = 1,2231$	$X4_{2016} — 222845 / 1075079 = 0,2072$
$X3_{2017} — 281925 / 1211418 = 0,2327$	$X4_{2017} — 713342 / 1211418 = 0,59$
$X3_{2018} — 1473539 / 1261902 = 1,168$	$X4_{2018} — 623612 / 1261902 = 0,494$

Table 4 – Calculation factors of Taffler model of JSC «Kharkiv Tractor Plant»

Indicators	2014	2015	2016	2017	2018
0,53X <sub>1</sub>	0,0423	-0,3025	-0,0877	0,116	-0,00265
0,13X <sub>2</sub>	0,049	0,0226	0,0127	0,028	0,04134
0,18X <sub>3</sub>	0,125	0,1079	0,22	0,0419	0,21024
0,16X <sub>4</sub>	0,1562	0,0078	0,033	0,094	0,07904

$$Z_{2014} = 0,0423 + 0,049 + 0,125 + 0,1562 = 0,3725$$

$$Z_{2015} = -0,3025 + 0,0226 + 0,1079 + 0,0078 = -0,1642$$

$$Z_{2016} = -0,0877 + 0,0127 + 0,22 + 0,033 = 0,178$$

$$Z_{2017} = 0,116 + 0,028 + 0,0419 + 0,094 = 0,2799$$

$$Z_{2018} = -0,00265 + 0,04134 + 0,21024 + 0,07904 = 0,33062$$

Based on obtained results the diagram has been built (Fig. 3).

Fig. 3 clearly demonstrates that possession structure and top-management changes as well as measures implemented from 2017 have positive consequences and

prospects. If 2015 shows almost bankruptcy of the enterprise, namely a number of penalties, judicial affairs, but the last few years demonstrate the efficiency of development strategy adopted at the enterprise.

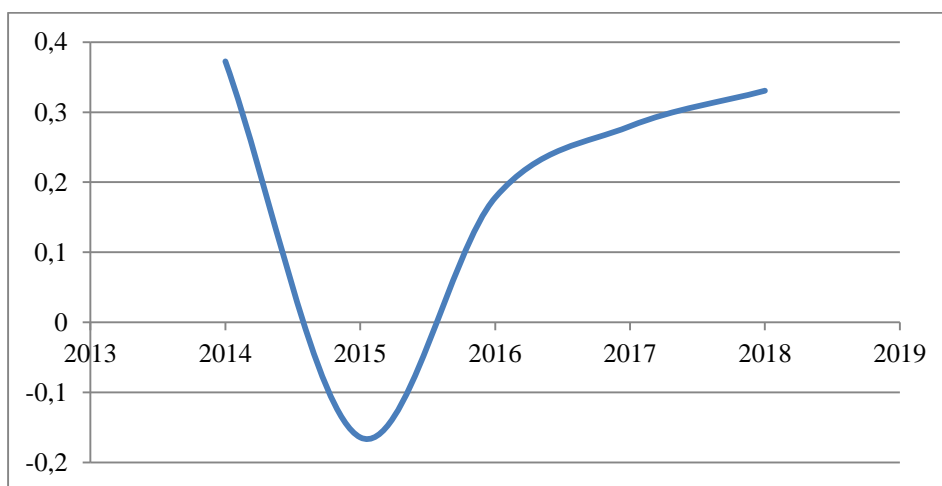


Fig.3. Dynamics of development strategy and perspectives efficiency of JSC «Kharkiv Tractor Plant»

**Conclusions**

The analysis suggests that, despite the crisis of 2016, JSC «Kharkiv Tractor Plant» is trying to solve problems with litigation and penalties and also, strategic planning of enterprise development is connected with high risk. The activities of the management of the enterprise have positive results, but one should point out among the constraints of strategic development of JSC «Kharkiv Tractor Plant» low scientific and innovative potential and lack of highly-skilled personnel that would contribute to development and implementation of innovative processes and insufficient quantity and variety of financing sources. The main purpose of enterprise development strategy is to find new markets for a product that has proven to be a good thing at other markets, and product improvement through upgrades and modifications etc.

In our opinion, enterprise development strategy has to include several directions:

- planning, considering risks, economic and financial competitiveness indices, and investment attractiveness indices;

- activities aimed at development of domestic market – development of joint programs with banks and leasing companies, aimed at the elaboration of conditions available to smallholder farmers as potential customers;
- the reorientation of export operations to Eurasia market and other markets taking into account the closed market of Russia;
- activities with a view to enhancing the effectiveness of enterprise activity – reduce product costs by reducing energy costs – utilizing energy-efficient programmes;
- measures to improve human resources ensuring system of Ukraine, training and professional upgrading of workers and management personnel, joint development of training programs that provide training for effective personnel;
- the full and effective utilization of available scientific potential and its further development for competitiveness increasing;
- reducing of investment risks;

– implementation of generally accepted standards and principles of corporative management, prevention violations of the rights of investors;  
– activization of information and organization support, attraction of investments, close interaction of executive authorities with investors;

– financial and credit managements lay the groundwork for the long-term development strategy in correspondent calculations, including elaboration of credit activity strategy, because ignoring industry features can lead to significant errors.

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