



Article

Foreign Experience In The Transformation Of The Chemical Industry And Its Practical Significance

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Abstract: This article explores the transformation of the chemical industry in developed nations and its implications for Uzbekistan. Despite extensive research on this subject, a knowledge gap exists in understanding how these transformations can be adapted to the Uzbek context. The study uses a comparative analysis of international case studies and Uzbekistan's industrial policies, focusing on key metrics like asset profitability, innovation, and financial stability. Findings reveal that adopting international practices can significantly enhance efficiency and profitability in Uzbekistan's chemical sector. The results have critical implications for policymakers, highlighting strategies for integrating global expertise into domestic industry practices.

Keywords: Transformation, Digital Transformation, Innovation, Depreciation, Gross Asset, Current Asset, Equity, Liability, Dividend.

1. Introduction

By the decree of the president of the Republic of Uzbekistan No. 60 of January 28, 2022, the development strategy of the new Uzbekistan for 2022-2026 maintains the industrial policy to augment the industrial share in the chemical industry. This policy aims to ensure the stability of the national economy and enhance the industrial share in the gross domestic product by increasing the volume of industrial product production by 1.4 times. Consequently, it becomes necessary to examine the sophisticated foreign expertise in guaranteeing the efficiency of the chemical industry's modernisation and validate its applicability in Uzbek practice. The strategy of the new Uzbekistan for 2022-2026, endorsed by the presidential decree of the Republic of Uzbekistan No. 60 on January 28, 2022, has a focus on industrial policy. This policy aims to enhance the industrial share in the chemical industry, ensuring the stability of the national economy and increasing the industrial share in the gross domestic product. This objective is considered essential for achieving a 1.4-fold increase in the volume of industrial product production. Therefore, it is necessary to examine the sophisticated foreign experience to guarantee the efficiency of the chemical industry's transition and establish the feasibility of applying it in Uzbek practice.

A. Sokolov highly evaluates the involvement of enterprises with state collaboration in the socio-economic progress of the country. According to him, firms involved in strategic state functions play a unique role in guaranteeing the steady expansion of industrial production and assuring the required quality of simultaneous growth.

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Indeed, in China, state-owned enterprises play a pivotal role in guaranteeing the long-term growth of the national economy. Adopted by the Chinese government in 2006, the "state medium and long-term (2006-2020) plan for the development of Science and Technology" acknowledges state-owned enterprises as key tools for structural restructuring of the economy and envisions the shift to a knowledge-based economy.

An essential scientific and theoretical concern in the evolution of the chemical industry is evaluating the efficacy of transformative developments. S. Cowan argues that the primary metrics that define the significance of the transformation of business operations are those that reflect the financial stability of entrepreneurs [4]. Consequently, the primary metrics that define the financial stability of firms are as follows:

Indices of liquidity, profitability, and debt service [5]. T. Kasaeva asserts that the success of business transformation is contingent upon the successful integration of innovations into their operations. The economic efficiency of these innovations is evaluated using the following indicators: The profitability resulting from implementing innovations; the growth in product sales volume; the reduction in the cost of capital in the volume of product sales; the shortening of investment coverage period; enhancements in resource utilisation; the increase in labour productivity; the acceleration of working capital rotation [6].

According to a cohort of economic experts from Uzbekistan, the primary emphasis in the process of rejuvenating industrial enterprises should be on enhancing network and technological frameworks, guaranteeing the uninterrupted flow of technical and technological advancements in production, cost optimisation, augmenting net profit, expanding investments in human capital, and reducing the financial capacity of key stakeholders [7].

2. Materials and Methods

The methodology of this study involves a comparative analysis of foreign experiences in the transformation of the chemical industry, with a focus on adapting these strategies to the Uzbek context. The research is conducted through a systematic review of relevant literature, focusing on case studies from developed nations that have successfully modernized their chemical sectors. Key data sources include industry reports, government policies, and academic papers. The study examines various transformation metrics, including asset profitability, innovation adoption, financial stability, and the role of state-owned enterprises. These indicators are analyzed to assess their applicability in Uzbekistan, taking into account the specific economic and industrial conditions of the country. The research also utilizes financial data from leading chemical companies, such as BASF, to provide quantitative insights into the effects of modernization initiatives. Additionally, the methodology involves analyzing policy documents, such as the Presidential Decree of Uzbekistan on industrial development, to understand the government's strategic priorities and assess the alignment of foreign models with national objectives. Data collected from these sources are evaluated using descriptive statistics to identify trends and draw comparisons between Uzbekistan's current practices and global standards. Expert opinions from economic and industrial specialists are incorporated to provide context and validate the findings. The outcome of this methodology is expected to yield practical recommendations for policymakers and industry leaders on how to effectively implement successful foreign practices in transforming Uzbekistan's chemical industry.

3. Results and Discussion

Numerous instances of successful transformation of state-owned firms, namely those in the chemical industry, may be observed in global practice. In 2004 the Malaysian government introduced the Government-Linked Companies (GLCs) transformation programme, which aimed to restructure state-owned enterprises in collaboration with

McKinsey & Company and Boston Consulting Group. The global community overwhelmingly regarded this project as the most effective initiative for the restructuring of state-owned companies in Asia. Consequently, the reform led to an improvement in the profitability of the assets of firms and the efficiency of resource utilisation. Specifically, between 2004 and 2008, the market capitalisation rate of the state-owned firms in the country increased threefold, with an average yearly growth rate of 11,0 percent [8]. The research of property reforms implemented in Central and Eastern European nations revealed that the process of transformation unfolded simultaneously with the period of the transformational crisis. Under such circumstances, both state-owned enterprises and privatised enterprises are involved in optimising external factors such as free investment resources, macroeconomic stability, production composition, investment climate, and availability of sales markets. The assertion that privatised firms perform more effectively under these circumstances compared to state-owned enterprises lacked justification [9]. Following will be an analysis of the primary indicators of BASF, the largest chemical company in Germany.

Table 1.
Brutto assets and current assets of BASF

Specification	2019 y.	2020 y.	2021 y.	2022 y.	Percentage change in 2022 compared to 2019
Brutto assets, mln. euro	86950	80292	87383	84472	97,2
Current assets, mln. euro	30990	29868	35051	37422	120,8

Analysis of Table 1 indicates that BASF's brutto assets decreased by 2.8 percent from 2019 to 2022. This decline can be attributed to the implementation of accelerated depreciation during this period, which results in a reduction of the starting balance value of the principal means.

The data presented in Table 1 indicates that BASF's current assets increased by 20.8 percent in 2022 as compared to the previous year, 2019. This rise can be attributed to the growth in the balance of commodity and material reserves and money in the volume of current assets over the examined period.

Notably, in the management of current assets in multinational firms, the primary emphasis is on the rotating speed of the tovarzahira, the rotational speed of receivables, and the change in the balance of cash per unit volume of current assets.

An essential determinant of the financial stability of chemical industry firms is the ratio of their capital to their current liabilities.

Table 2
BASF company Capital, current liabilities and the level of capital relative to current liabilities

Specification	2019 y.	2020y.	2021y.	2022y.	Comparison of 2022 with 2019
Capital, mln. euro	42350	34398	42081	40923	96,6 %
Current liabilities, mln. euro	80292	86950	87383	84472	105,2 %
The level of capital relative to current liabilities, %	52,7	39,6	48,2	48,4	- 4.3 f.p.

The data in Table 2 indicates that BASF's capital has declined by 3.4 percentage points in 2022 as compared to 2019. Furthermore, throughout this time frame, the capital

level in respect to current liabilities declined by 4.3 percentage points. These instances are regarded unfavourable in terms of guaranteeing the financial stability of the company.

The data presented in Table 2 indicates that BASF's current liabilities had a growth of 3.4 percent as compared to the year 2019. This rise can be attributed to an increase in the quantum of payments made on securities issued by the corporation during this time frame.

The market valuation of chemical industry firms and the percentage growth in their capitalisation are directly influenced by the dividend amount distributed to their common shares.

Based on the provided image data, we will assess the stability of dividends distributed by BASF corporation to its ordinary shares.

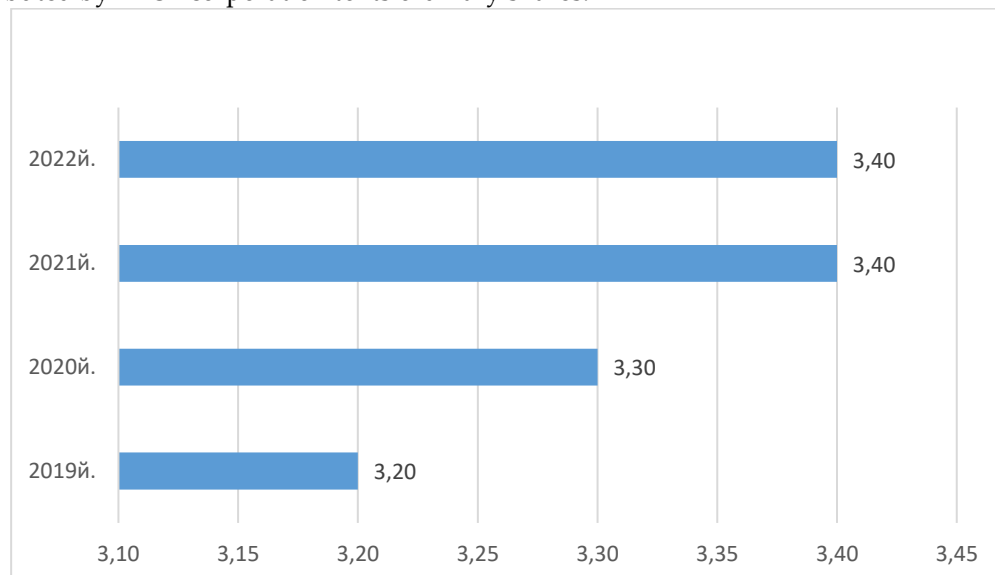


Figure 1. The amount of dividends paid to ordinary shares of the BASF company, in the amount of euros per share

Analysis of Figure 1 reveals that the dividends distributed by BASF business to its ordinary shares were consistent from 2019 to 2022. Furthermore, the dividend per ordinary share rose by 0.20 euros in 2022 as compared to 2019.

Calculation of dividend amounts in international commercial practice

Three versions are employed:

1. Dividends to net profit ratio expressed as $D / E = \text{const.}$
2. Ratio of the dividend per share to the current market price of the stock, expressed as D / P , remains constant.
3. Fixed dividend per share $D / \text{Sh} = \text{constant.}$

Currently, BASF corporation is implementing the third method of distributing dividends to its ordinary shares. In accordance with the residual principle of dividend payment, dividends are distributed from the net profit of the present year, namely after all other payments have been made.

When the residual concept of dividend payment is used, it becomes unnecessary to ascertain the precise amount of dividends to be paid by the corporation.

Most firms do not employ the constant ratio method for determining dividends to net profit. The rationale behind this is the strong likelihood of an increase in the dividend amount paid in this particular option. Simply said, when the Net Profit of the company rises, the dividends paid also rise.

4. Conclusion

The process of transforming the chemical industry in Central and Eastern European countries occurred simultaneously with the period of the transformational crisis. In such circumstances, both state-owned enterprises and privatised enterprises were influenced by external factors such as free investment resources, macroeconomic stability

level, production structure, investment climate, and availability of sales markets. The assertion that privatised firms perform more effectively under these circumstances compared to state-owned enterprises lacked justification.

The 2.8 percentage point fall in BASF's brutto assets in 2022, as compared to 2019, can be attributed to a decline in the initial balance sheet value of important instruments resulting from the implementation of accelerated depreciation during this accounting period.

The 20.8 per cent rise in BASF's current assets in 2022, as compared to 2019, can be attributed to the growth in the proportion of commodity and monetary funds in the overall volume of current assets over the examined period.

The decline in BASF's capital by 3.4 percentage points in 2022 compared to 2019, together with the 4.3 percentage point fall in the level of capital relative to current obligations throughout this period, is a detrimental condition for the company's solvency.

Therefore, we propose using the following strategies to leverage the sophisticated foreign expertise in the process of transforming the chemical industry in our republic:

To enhance the international trade operations of chemical industry firms, it is important to first diversify their exports and secondly employ a strategy of frequent implementation of strategic alternatives.

Among the four strategic alternative strategies in international practice, the replication strategy (also known as the home replication strategy) is a method that leverages the successful elements that a company has accomplished in its home country in foreign markets. The replication approach lacks provisions for modification to environments.

Within the framework of the Global strategy of strategic alternative, the entire world is perceived as a unified market.

The Global strategy provides uniform standardised products and services in all countries to effectively cater to the demands of consumers.

Within the framework of the multilocal tactical option (multidomestic strategy), autonomous subsidiary firms of multinational corporations engage in active operations within foreign marketplaces. Thus, affiliate firms modify their products to suit the preferences of local consumers, taking into account the unique characteristics of local marketplaces.

The transnational approach of strategic alternative (transnational strategy) aims to balance the autonomy of subsidiary firms with the benefits of enhancing efficiency during the process of globalisation.

Within most organisations that adopt this approach, the Parent Company assumes responsibility for research and development as well as financial operations, while subsidiary firms are engaged in marketing and personnel management.

In order to enhance the profitability of state-owned enterprises during the transformation process, two key measures need to be implemented. Firstly, the practice of cost management should be improved to decrease the revenue volume associated with product costs. Secondly, the expanding use of futures contracts should be pursued to guarantee the stability of purchase prices for imported raw materials.

To enhance the practice of cost management, it is essential to use the cost management option that relies on problem grouping and decision-making based on the analysis of the Coordinating Council. Additionally, it is indispensable to maintain a consistent level of cost discounting and net discounted income. Lastly, in the establishment of

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