

ECONOMICS AND MANAGEMENT AT ENTERPRISES

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COMPETITION POLICY OF INTERNATIONAL CONSULTING COMPANY OF TECHNICAL DESIGN AND ENGINEERING

In the conditions of bifurcation transformations of the business environment, due to several various reasons, the investigation of the competition policy vectors of an international company of consulting and technical design is crucial.

The relevance of the topic is due to the phenomenal quintessence of the competition policy strategy, which is the core of the formation mechanism of successful dominant foreign economic activity of the company within the global space of innovative economy taking into consideration the specific characteristics of consulting and engineering sphere.

The purpose of the work is to develop a theoretical and methodological justification and practical recommendations on the competition policy of an international consulting company of technical design and engineering in modern conditions.

Achieving the purpose implies solving the following tasks: to determine the essence of the concept and peculiarities of the competition policy of an international consulting company; to analyze the company's competition policy and features of the international market of consulting services; to form methodological recommendations and strategy of competition policy of the international consulting company of designing and engineering.

The object of research is the process of international activity of a consulting company of design and engineering. **The subject** is the formation of theoretical and methodological principles, practical aspects of evaluation, and recommendations for the company's competition policy in the sphere of technical consulting and engineering.

The following research **methods** were used to implement the tasks: analysis and synthesis (in determining the peculiarities of the consulting company's competition policy); economic, mathematical, and statistical methods (in the analysis of the international market of consulting and design); Herfindahl-Hirschman monopolization index, concentration index (CR), Kolmogorov-Smirnov criterion (in the analysis of competition policy); the Delphi method, the Ishikawa system, and the Wildman table-test (in determining the strategy of the consulting company's competition policy).

The results of the research are a comprehensive practical analysis of competition policy of an indicated for the investigation international consulting company of technical design and engineering with a step-by-step individual method of calculating deficiencies and developing strategies to eliminate them, as well as a thorough review of the international technical consulting and engineering market.

Keywords: competition policy, competition advantage, competition strategy, international consulting, consulting company, consulting services, tools of competition, evaluating the competition policy.

Analysis of recent research and publications. The radical transformation of international business against the background of accelerating integration, individualization of requirements, variability and differentiation of consumer preferences, permanent reduction of innovation implementation time leads to the rapid development of the main peculiarities of international competition policy.

According to the research, it was found that a significant contribution to the development of methodological features of the company's competition policy based on economic and mathematical modeling, made the following specialists: V. V. Atyushkina¹, T. P. Gudz², O. S. Kichuk³, Yu. V. Samoylyk and O. A. Voloshyna⁴, L. P. Snigir⁵, O. G. Yankovy⁶, L. M. Yaremchenko. Among many fundamental studies of foreign scientists should be distinguished: A. M. Brandenburger, W. Broll, P. Dixon, K. Arrow, F. Kotler, J. F. Moore, B. J. Neilbaff, M. Perlitz, M. Posner, M. Porter, K. Huxaver, J. Schumpeter.

Most aspects of the topic have already been reflected in works of experts. However, rapid changes necessitate a systematic and comprehensive study of the competition policy of an international company. In addition, taking into account the specific sector characteristics of the consulting services, design, and engineering sphere, the analysis of the competition position of the international business entity is not fully disclosed and the existing works are covered in fragments.

Main part. A company's international competition policy is a relative concept that operates not only on the scale of a particular market segment but also tied to a period of time. With the constant quality and cost characteristics of the international company's its competition policy on foreign markets can change a lot over a short period.

Despite the fundamental research of competition policy, there is currently no single universal interpretation of its essence, and each scientist interprets it differently, which leads to the existence of more than a dozen theories. Among the reasons for this diversity is the inconsistency and variability of factors on which competition policy depends. That is why there are many interpretations of the concept of international competition policy of the company (table 1)⁷.

According to the data of table 1, it is appropriate to identify several essential peculiarities by which the international competition policy of a consulting company is defined as:

- 1) non-immanent quality that can be assessed only in the presence of competitors;
- 2) the relevant criterion, when the trajectory of movement (competition position) of the subject relative to others can be determined only within the environment;
- 3) the result of human capital, which has a temporal character (dynamism), characterizes the position of the subject in the competition field in the coordinates of time and the continuity of the international economic system.

Factors of the external and internal environment that directly impact the competition policy of an international consulting company for technical design and engineering are presented at Fig. 1⁸.

Today, design and engineering consulting companies should focus on ensuring international competitiveness in foreign markets, conduct quarterly monitoring of competitors and business environment trends; carry out internal audit, taking into account the influence of political and economic factors and scientific and technical updates.

In general, the doctrine of competition policy is defined as a multi-component and multifunctional concept that involves the interaction of resource potential of the consulting company – production, innovation, personnel, marketing, management, finance, and is a set of interconnected elements of the system. As can be seen from Fig. 2 the structure of the concept is formed by eight blocks, which reflect the specific measures in their relationship.

¹ Атюшкіна, В. В., Педко, І. А. (2018). Управління конкурентним потенціалом підприємства на основі оцінювання комплексу маркетингу. *Маркетинг і цифрові технології*, 3, 85-103.

² Гудзь, Т. П. (2016). Формування фінансової рівноваги підприємства: методологічний аспект. *Актуальні проблеми економіки*, 7 (181), 8-15.

³ Кічук, О. С. (2018). Інноваційна активність як шлях підвищення конкурентоспроможності українських підприємств. *Глобальні та національні проблеми економіки*, 22, 388-391.

⁴ Самойлюк, Ю. В., Волошина, О. А. (2016). Конкурентоспроможність продукції вітчизняних підприємств у контексті європейської інтеграції. *Глобальні та національні проблеми економіки*, 9, 413-418.

⁵ Снігир, Л. П. (2015). Конкурентоспроможність вищих навчальних закладів як механізм забезпечення економічної безпеки освіти. *Вісник Хмельницького національного університету. Економічні науки*, 4 (2), 157-162.

⁶ Янковий, О. Г. (2013). *Конкурентоспроможність підприємства: оцінка рівня та напрями підвищення*. Одеса: Атлант.

⁷ Гаркуша, В. О. (2019). Сучасний інструментарій оцінки конкурентоспроможності підприємства. *Електронне наукове фахове видання Східна Європа: економіка, бізнес та управління*, 6 (23), 6-17.

⁸ Гаркуша, В. О. (2020). Конкурентоспроможність новоствореного підприємства на етапі виходу на ринок. *Міждисциплінарні наукові дослідження: особливості та тенденції*, 1, 55.

Table 1

The concept of international competition policy of the company

Factors (differences)	International competition policy (definition, author)
Fight for market share	Constant competition of producers in the international market for increasing its share in the market segment. (E. Chamberlin)
Comparison with other goods and services	The ability of goods or services to withstand comparisons with similar goods and services of other manufacturers and to be sold in this connection at prices not lower than the market average. (J. Robinson)
Compliance with requirements	The ability of products to meet the established international requirements of a particular market for a certain period. (J. B. Clark)
Fight for the most profitable positions	Organizational means of stimulating competition between the subjects of industrial relations for the most profitable areas of capital supply, international markets, sources of raw materials, territorial, functional, administrative conditions for economic and financial activities. (I. Ansoff)
Use of competition advantages	Potential or realized ability of the subject of international competition to operate in the global economic space, which is based on the use of global competition advantages and aimed at achieving the goals of its international business. (J. M. Keynes)
Profit maximization	Competition in the international arena between producers of goods and services for the right to maximize profits. (M. X. Mescon)
Use of resource potential in the international market	The ability of efficient production and economic activity in a global competition market, provided by the full range of resources available to the company and is a general indicator of its viability and ability to effectively use their financial, production, scientific, technological and labor potential. (J. M. Keynes)

Source: developed by the authors.

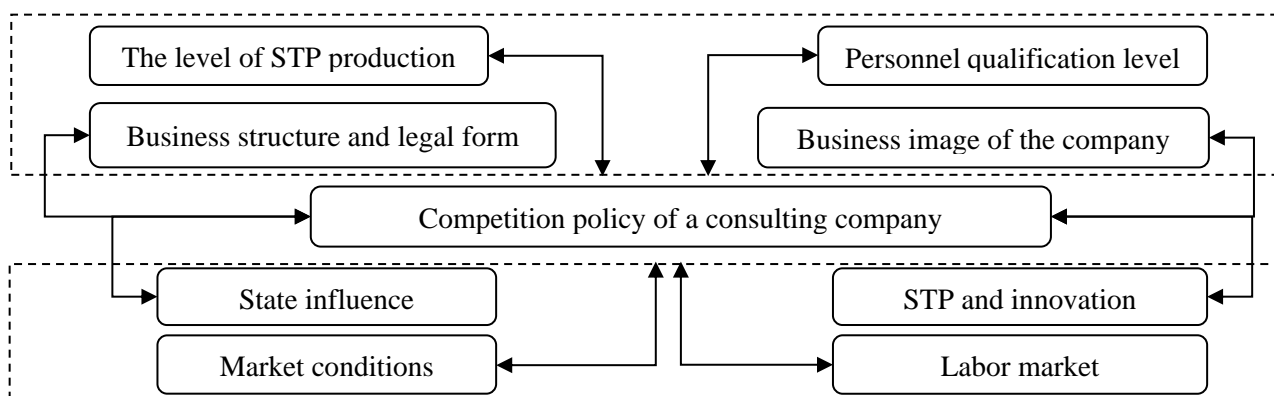


Fig. 1. Factors that are influencing the competition policy of an international consulting company of technical design and engineering

Source: developed by the authors.

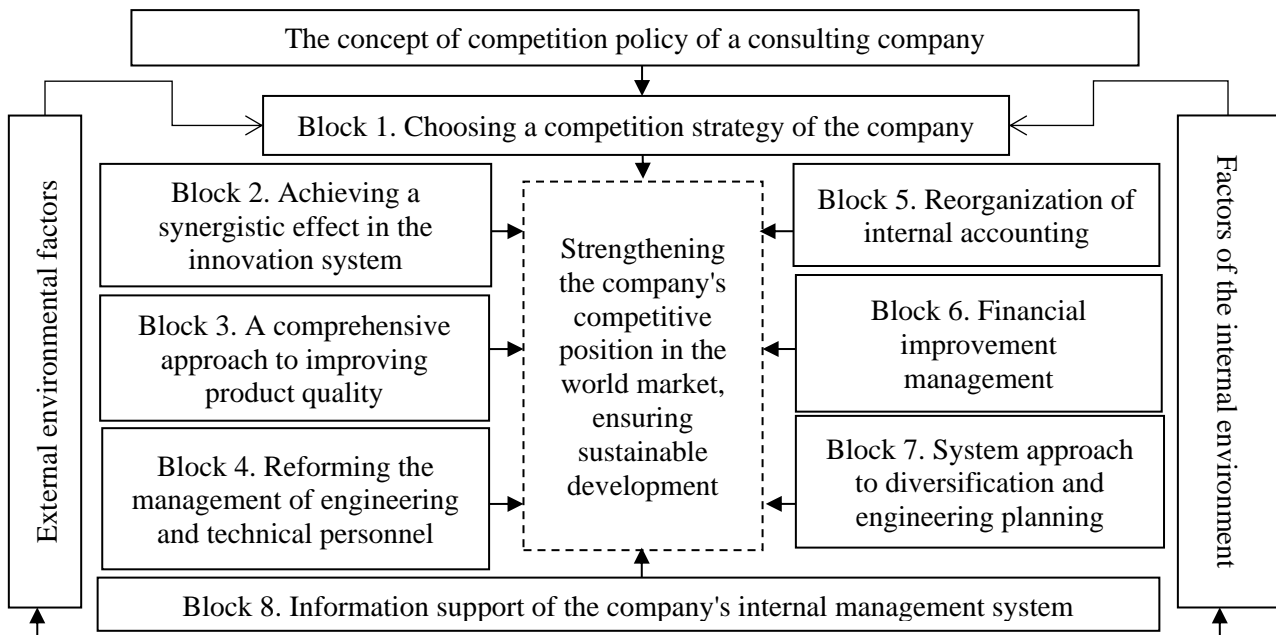


Fig. 2. Block diagram of the competition policy concept of a consulting company of technical design and engineering

Source: developed by the authors.

Based on the axiological approach, the use of IT systems (software and databases) by international engineering companies to ensure the excellence of developments, such as Salesforce, AX MSFT Dynamics, CRM Sales, ERP system, Service Console, should be outlined. In general, according to statistical research WSP PARSONS BRINCKERHOFF, net profit of companies due to the implementation of, for example, Salesforce CRM-system, increased by 8% per year and a half, as well-established management significantly increased customer satisfaction¹.

It should be noted that technical design means the process of developing technical documentation (drawings, calculations, explanatory notes), on the basis of which the technical object is made. Engineering is a form of export of engineering consulting services (knowledge, technology and experience) for the development of facilities.

It is essential to indicate that the leader in consulting technical services is the United States, where more than 58 thousand companies of various profiles are registered². Their number is steadily growing in the EU countries – about 39 thousand, and mostly in Germany and Austria. The proportions of this business are distributed as follows: 2% of large consulting companies serve 66% of clients, 11% of medium – 25%, 87% of small – 9% of global clients. In the USA, about $\frac{3}{4}$ consultants work in companies with more than 100 employees³. However, an investigation of client satisfaction with the services of these companies revealed that the larger the company, the smaller the satisfaction level of clients is (Fig. 3).

¹ Дорофеев, К. В. (ред.) (2014). *Высокотехнологичный компьютерный инжиниринг: обзор рынков и технологий*. Санкт-Петербург: Издательство Политехнического университета.

² Мясников, В. В. (2013). Фіктивну модернізацію зупинять інжинірингові компанії. *Незалежна газета*, 7, 26-32.

³ Кузьмін, О. Е., Жежуха, В. Я., Городиска, Н. А. (2014). Іноземний досвід інжинірингової діяльності. *Проблеми економіки*, 3, 240-245.

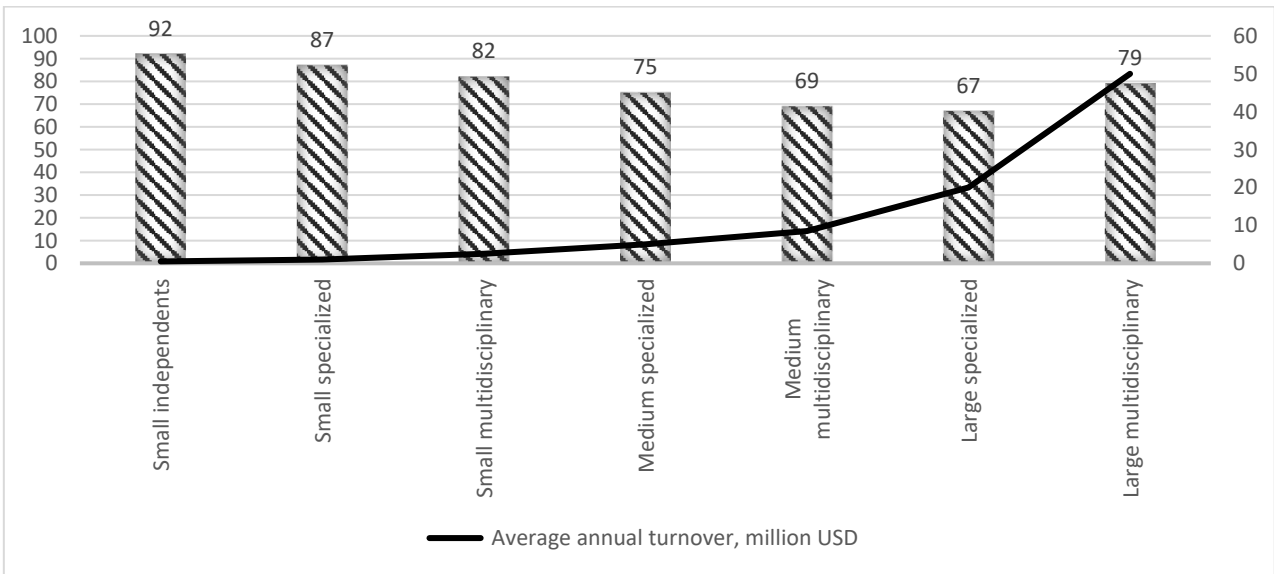


Fig. 3. Level of client satisfaction depending on the size of the company, %

Source: developed by the authors on the basis of Kuzmin O. E., Zhezhukha V. Y., Horodyska H. A.¹

Consulting companies from highly developed countries account for 95% of exports and 80% of imports of design services. The largest markets are Asia-Pacific (53%) and European (38.2%)¹⁰. The main exports are the EU, USA, Japan, a small share have Russia, China, India, Turkey. Imports of consulting companies are geographically similar to exports.

The dynamics of the consulting services market of engineering and technical design of Europe and the United States is presented in Fig. 4. According to WSP PARSONS BRINCKERHOFF, the market turnover in the United States in 2020 was estimated at 175 billion US dollars (47.2%), while the share of the European market was 156 billion US dollars (42%), Japan – 13 billion US dollars, other countries – 27 billion US dollars². These data show the net turnover of engineering design.

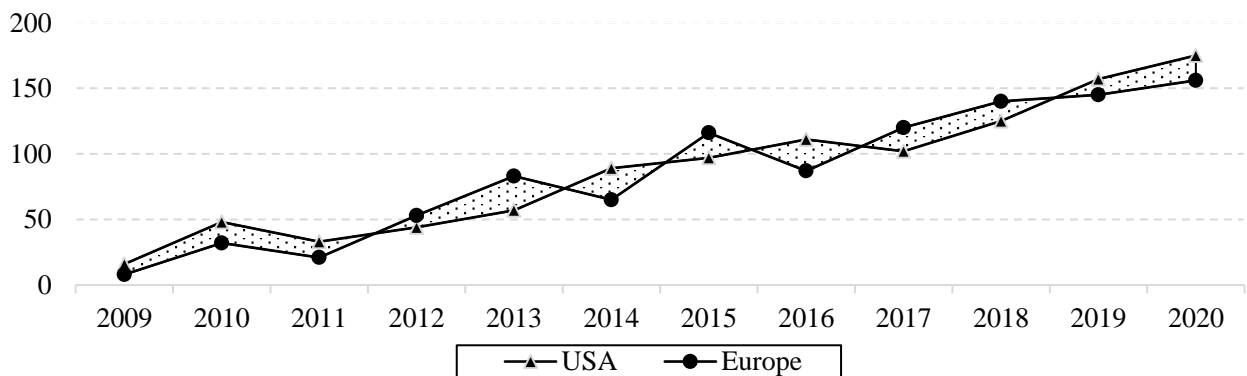


Fig. 4. Dynamics of the consulting services market of technical design of the USA and EU countries, billion US dollars

Source: developed by the authors based on Free small business data and trends³

¹ Кузьмін, О. Е., Жежуха, В. Я., Городиска, Н. А. (2014). Іноземний досвід інжинірингової діяльності. *Проблеми економіки*, 3, 240-245.

² Moisuk, E., Gutierrez, M., Brissette, R. (2021). Free small business data and trends. *Small Business Administration* <<https://www.sba.gov/business-guide/plan-your-business/market-research-competitive-analysis#section-header-5>> (2021, October, 23).

³ Ibid.

Taking into account other consulting services (engineering, auditing, legal services, investment, advertising services), the total turnover increases tenfold. Analysis of the structure of consulting services is shown in Fig. 5 results.

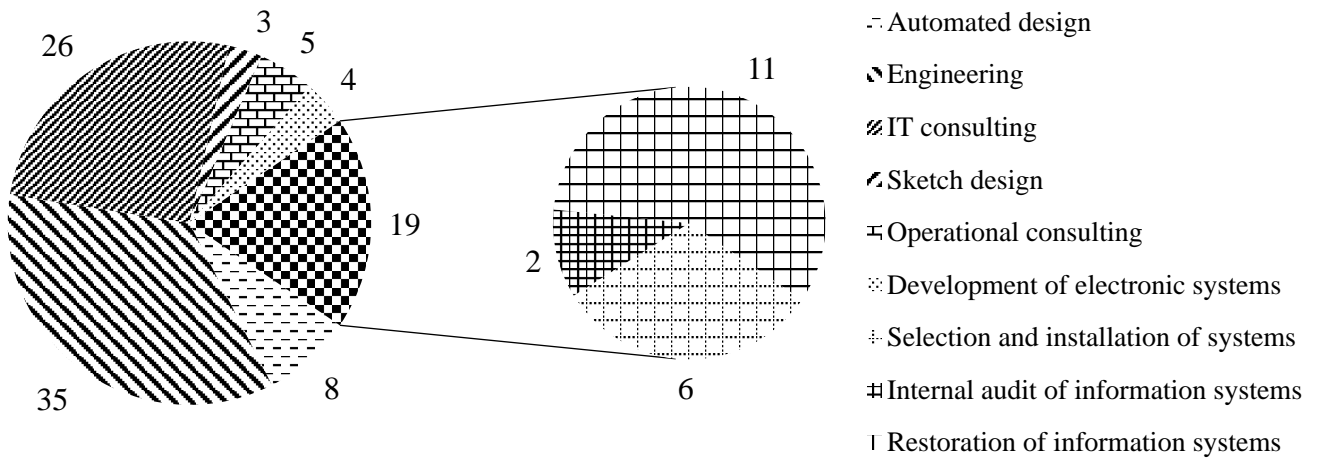


Fig. 5. Structure of consulting services for technical design, %

Source: developed by the authors on the basis of Kuzmin O. E., Zhezhukha V. Y., Horodyska H. A.¹

It is advisable to analyze the structure of technical design services by areas of customer activity (Fig. 6).

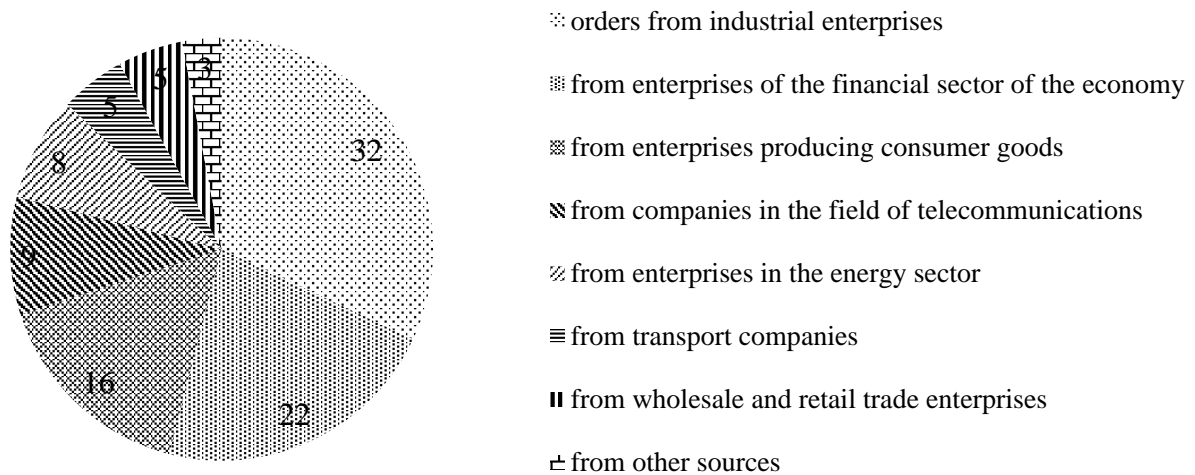


Fig. 6. Structure of consulting services for different areas of client activity, %

Source: developed by the authors on the basis of the data²

¹ Кузьмін, О. Е., Жежуха, В. Я., Городиска, Н. А. (2014). Іноземний досвід інжинірингової діяльності. *Проблеми економіки*, 3, 240-245.

² Moisuk, E., Gutierrez, M., Brissette, R. (2021). Free small business data and trends. *Small Business Administration* <<https://www.sba.gov/business-guide/plan-your-business/market-research-competitive-analysis#section-header-5>> (2021, October, 23).

The data from Fig. 6 show that the largest share among B2B client is occupied by industrial companies (32%), and only 5% – by commercial.

The most optimal methods of analyzing the competition policy of an international design and engineering consulting company are:

index methods (benchmarking, Herfindahl-Hoffman index, Rosenblut index, integral valuation method),
matrix methods (BCG matrix, Ansof matrix, Shell/DPM matrix)
graphical methods (competitiveness radar, profile method, map of strategic groups),
characteristics, advantages and disadvantages of which are given in Table 2.

Table 2

Comparative characteristics of calculation methods for evaluating the competition policy of a consulting company

Method	Features	Advantages	Disadvantages
Index valuation methods	Standardization of indicators of competitiveness factors and their presentation in the form of normalized partial coefficients of competitiveness.	1. Provide a comparison of competitiveness factors. 2. Take into account factors that are measured by qualitative methods.	1. The complexity of data collection. 2. There is often the use of unsystematic set of factors, which leads to excessive detail of some groups of factors and disregard for others.
Methods of integrated assessment	Summary of partial indicators (normalized coefficients, indices) into an integrated indicator by averaging, summing, multiplying.	1. Provide a generalized quantitative assessment of the level of competitiveness.	Usually do not take into account the advantages of competitors. 2. Unreasonableness of the application of the sum for the calculation of the integral coefficient.
Comprehensive evaluation methods	Calculation (based on the index method and methods of integrated evaluation) of an integrated indicator that takes into account the current competitiveness.	1. Provide a comparison of competitiveness factors. 2. Take into account factors that are measured by qualitative methods.	1. Unreasonableness of the application of the sum for the calculation of the integral coefficient.
Methods of the theory of effective competition	Calculation of the integrated coefficient of competitiveness on the basis of expert assessment of competitive factors.	3. Provide a generalized quantitative assessment of the level of competitiveness	2. Expert methods are often used, which leads to a high degree of subjectivity.

Source: developed by the authors.

Today (due to computer implementation) the methods of matrix factor analysis are becoming more widely used. PCA-PM methods (matrix regression analysis), PLS-PM (Project on Latent Structures Path Modeling or projection-regression on latent structure) to model the relationships between latent variables, such as company competition policy are also used¹. They analyze large-scale data in a poorly structured environment.

For a thorough analysis of competition policy, it is expedient to choose an international Canadian company of technical design and engineering – "Artaflex-Toronto Inc", on the example of which research and calculations are performed.

First of all, it is essential to assess the impact of suppliers on the competition policy of the consulting company. The analysis of the probability of strengthening market power, which is carried out mainly by two means – price and quality, and control over the terms of the agreement by suppliers of the company "Artaflex-Toronto Inc" are given in Table 3.

The score of almost 53 points is quite significant, which indicates a significant probability of strengthening the monopoly position of suppliers. That is why "Artaflex-Toronto Inc" should focus on reducing resource dependence. Particular attention should be paid to the high probability of rising prices for supplies.

¹ Полянська, А. (2009). Формування конкурентної політики вітчизняних підприємств в сучасних умовах. *Управління та підприємництво в Україні: стадії формування та проблеми розвитку: Вісник Національного університету «Львівська політехніка»*, 657, 293-298.

Table 3

Competition action analysis of the suppliers of "Artaflex-Toronto Inc"

№	Competitor's ability	Assessment of the probability of a competition event by experts			Average probability of the event v_i	Weight, w_i	Score $v_i \times w_i$
		1	2	3			
1	Single sales policy by all suppliers	75	60	60	65,00	0,2	13,00
2	Strengthening the monopoly position of the supplier	10	10	15	11,67	0,1	1,17
3	Rising resource prices	85	80	85	83,33	0,4	33,33
4	Decrease in quality of raw materials	20	15	15	16,67	0,2	3,34
5	Supply limitations	20	15	15	16,67	0,1	1,67
Total		X	X	X	X	1,0	52,51

Note. Rating scale: from 0 (weakest impact) to 100 (strongest impact).

Source: calculated by the authors according to the consulting company data¹.

"Artaflex-Toronto Inc's" competition policy should also concentrate on product packaging, since a significant number of complaints and claims have been obtained from clients who were extremely dissatisfied with the quality, density and tightness of the packaging. That is why it is rational to test the hypothesis according to the Kolmogorov-Smirnov criterion about the distribution identity of the variable of the ordinal type with the maximum deviation of the accumulated relative and theoretical frequencies².

First, the preferences of 100 respondents over several packaging options with different sizes and qualities were measured (Table 4).

Table 4

Distribution of the number of respondents who chose different packaging options of "Artaflex-Toronto Inc"

Packaging option	Result
1	7
2	38
3	26
4	29
Total	100

Source: calculated by the authors.

For samples of more than 35 observations, the null hypothesis should be rejected with a probability of 10%, 5% and 1%. In this case, the influence of the size and quality of packaging on the formation of customer preferences with significance levels of 5% and 1% should be taken. As a working hypothesis, the option "packaging is important when choosing a product" should be accepted. As a null hypothesis – an alternative assumption: "products with different types of packaging have equal chances (frequencies) to be selected by customers." The calculation is given in Table 5 by the following method:

$D_n^+ \geq 1,22/\sqrt{100}$ with a probability of 1%;

$D_n^+ \geq 1,36/\sqrt{100}$ with a probability 5%;

$D_n^+ \geq 1,63/\sqrt{100}$ with a probability of 10%³.

¹ Moisuk, E., Gutierrez, M., Brissette, R. (2021). Free small business data and trends. *Small Business Administration* <<https://www.sba.gov/business-guide/plan-your-business/market-research-competitive-analysis#section-header-5>> (2021, October, 23).

² Гаркуша, В. О. (2019). Сучасні маркетингові інструменти впливу на поведінку споживача. *Інноваційний розвиток інформаційного суспільства: економіко-управлінські, правові та соціокультурні аспекти*, 10, 56.

³ Мантур-Чубата, О. С. (2015). Організаційно-економічний механізм управління ризиками зовнішньоекономічної діяльності підприємства: *дисертація на здобуття наукового ступеня кандидата економічних наук*. Хмельницький: Хмельницький національний університет.

Thus, with a probability of hypothesis of 1%, the value is $0.04 < 0.122$ and with a probability of 5% - $0.04 < 0.136$, which means that in this case the size and quality of packaging do not affect the formation of client preferences when choosing products of "Artaflex-Toronto Inc". The hypothesis was not confirmed (Table 5).

Table 5

Calculation of differences in the distribution of frequencies of the variable according to the Kolmogorov-Smirnov system for "Artaflex-Toronto Inc"

Frequencies in the sample			Theoretical frequencies			3-6
absolute	relative	accumulated relative	absolute	relative	accumulated relative	
1	2	3	4	5	6	7
7	0,07	0,07	25	0,25	0,25	-0,18
38	0,38	0,45	25	0,25	0,5	-0,05
26	0,26	0,71	25	0,25	0,75	-0,04
29	0,29	1	25	0,25	1	0
100	1	X	100	1	X	X

Source: calculated by the authors.

By type of information and economic cooperation, "Artaflex-Toronto Inc" operates in the B2B segment and interacts only with legal entities (Fig. 7).

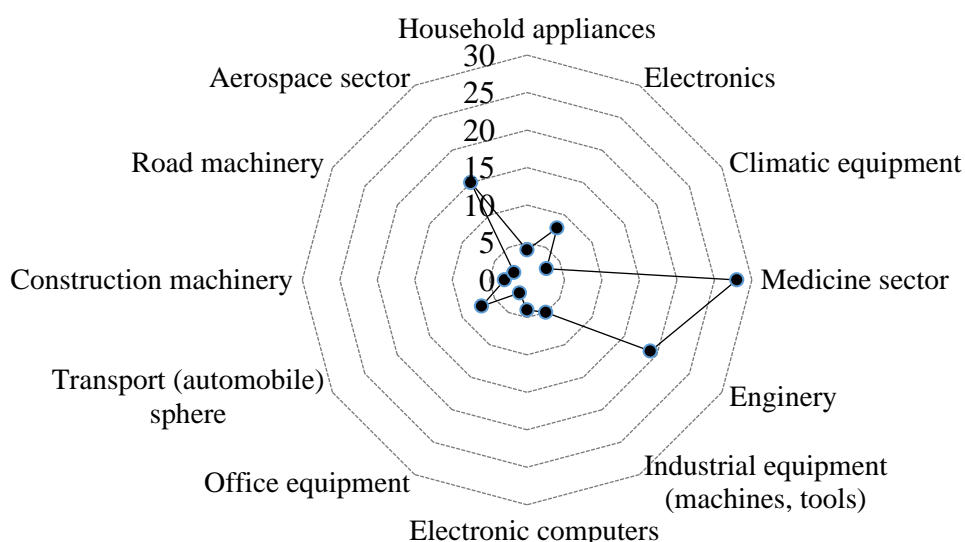


Fig. 7. Areas of activity of the main clients of "Artaflex-Toronto Inc",%

Source: formed by the authors according to the consulting company¹.

After analyzing the data from Fig. 7, it should be emphasized that the largest share of "Artaflex-Toronto Inc's" clients is occupied by medical and military companies (28 and 19%, respectively). Along with this, the aerospace sector is in demand (15%).

For a thorough assessment of "Artaflex-Toronto Inc's" competition policy, it is worth examining the level of market monopolization. It is essential to calculate the Herfindahl-Hirschman index (HHI), which is defined as the sum of the squares of the percentages of each market participant².

¹ Moisuk, E., Gutierrez, M., Brissette, R. (2021). Free small business data and trends. *Small Business Administration* <<https://www.sba.gov/business-guide/plan-your-business/market-research-competitive-analysis#section-header-5>> (2021, October, 23).

² Гудзь, Т. П. (2016). Формування фінансової рівноваги підприємства: методологічний аспект. *Актуальні проблеми економіки*, 7 (181), 8-15.

Thus, the sales volume of "Artaflex-Toronto Inc" and the main competitors with the calculation of market share in 2020 (with a total market capacity of 1 990 677 thousand US dollars), is given in Table 6. The data for calculation is from official sources¹

Table 6

Annual sales of "Artaflex-Toronto Inc" and competitors in 2019-2020

Name of consulting company and competitors	Annual sales in 2019, thousand US dollars	Annual sales in 2020, thousand US dollars	Growth rate,%	Market share in 2020,%
"Artaflex-Toronto Inc"	157889	187564	18,79	6,97
Competitor 1	149583	139864	-6,50	5,20
Competitor 2	176503	185980	5,37	6,91
Competitor 3	209425	199074	-4,94	7,40
Competitor 4	227596	239460	5,21	8,90
Competitor 5	149879	154907	3,35	5,75
Competitor 6	216904	210015	-3,18	7,80
Competitor 7	145976	143907	-1,42	5,35
Competitor 8	185609	187900	1,23	6,98
Competitor 9	169086	176908	4,63	6,57
Competitor 10	159074	165098	3,79	6,13

Source: formed by the authors on the basis of the data².

It is crucial to calculate the concentration index (CR), which shows the market shares of a given number of the largest players, and the Herfindahl-Hirschman index for the 10 leading consulting companies.

This example illustrates the shortcomings of the concentration index. The formula for calculating the Herfindahl-Hirschman index is given below, where Si is the share of each market participant [11, p. 55].

$$HHI = \sum_{i=1}^n S_i^2 \tag{1}$$

$$HHI = S_1^2 + S_2^2 + \dots + S_n^2 \tag{2}$$

The four-part concentration indicator (CR4 - Concentration Ratio) is presented below and in table 7, allowing to assess the degree of market monopolization and is a value inverse to the intensity of competition.

Table 7

Calculation of concentration ratios of 10 competitors of "Artaflex-Toronto Inc"

Concentration Index CRn	Calculation of the indicator for 2020	Value
CR3	11,43+10,89+10,52	0,3284 (32,84%)
CR4	11,43+10,89+10,52+9,32	0,4216 (42,16%)
CR6	11,43+10,89+10,52+9,32+8,86+8,49	0,5951 (59,51%)
CR8	11,43+10,89+10,52+9,32+8,86+8,49+7,99+7,93	0,7543 (75,43%)
CR11	11,43+10,89+10,52+9,32+8,86+8,49+7,99+7,93+7,52+7,51+7,33	0,9779 (97,79%)

Source: formed by the authors on the basis of the data³.

¹ Moisuk, E., Gutierrez, M., Brissette, R. (2021). Free small business data and trends. *Small Business Administration* <<https://www.sba.gov/business-guide/plan-your-business/market-research-competitive-analysis#section-header-5>> (2021, October, 23).

² Ibid.

³ Ibid.

$$CRn = \sum_{i=1}^n S \tag{3}$$

$$CR3 = S_1 + S_2 + S_3 \tag{4}$$

Therefore, the calculation of indices showed the following results:

$$HHI = 7,93^2 + 7,51^2 + 8,86^2 + 10,52^2 + 11,43^2 + 7,52^2 + 10,89^2 + 7,33^2 + 9,32^2 + 8,49^2 + 7,99^2 = 888,72; \text{ therefore } CR11 = 97,79.$$

It is extremely rare when absolutely all market participants and their shares are clearly identified. Thus, for practical application, the formula takes into account the largest players in descending order of their market share (influence). So, with an arithmetic reduction in the number of market participants, the value of HHI increases exponentially.

In order to identify competition strategy of an international consulting company of technical design and engineering, first of all, it is crucial to assess the attractiveness of the strategic zone "Artaflex-Toronto Inc" by the Delphi method. The assessment of the external environment on a scale from -5 to 5 (Table 8) showed an overall assessment of changes 4, which indicates a not very positive forecast for increasing the strategic management area.

Table 8

"Artaflex-Toronto Inc" Environmental Assessment Scale

Parameters	Intensity scale											
	-5	-4	-3	-2	-1	0	1	2	3	4	5	
1. The growth rate of the industry									●			
2. Increasing the number of consumers											●	
3. Dynamics of market expansion								●				
4. The degree of product renewal									●			
5. The degree of technology update												
6. The level of saturation of demand												
7. Public perception of the product												
8. State regulation												
9. Increasing the number of competitors												
10. The degree of obsolescence of products												
General assessment of changes	4											

Source: developed by the authors on the basis of research Yankovy O. G. (2013)¹.

To solve the problem of poor quality packaging, it is advisable to use a comprehensive approach to quality management based on the system of Japanese scientist Kaoru Ishikawa² (Fig. 8). The main feature of the approach is the participation of employees of all levels of the hierarchy in the management of packaging quality.

¹ Янкoвий, O. Г. (2013). Конкуpентoспpомoжнiсть пiдпpиeмствa: oцiнкa рiвнiя та нaпpямi пiдвищeння. Oдeca: Aтлaнт.

² Пoляньcькa, A. (2009). Фopмувaння конкуpентнoї пoлiтики вiтчизняних пiдпpиeмств в cучacних умoвах. Упpавлiння та пiдпpиeмництвo в Укpаїнi: cтaдiї фopмувaння та пpоблeми poзвитку: Вiсник Нaцiональнoгo унiвepcитeту «Львiвcькa пoлiтeхнiкa», 657, 293-298.

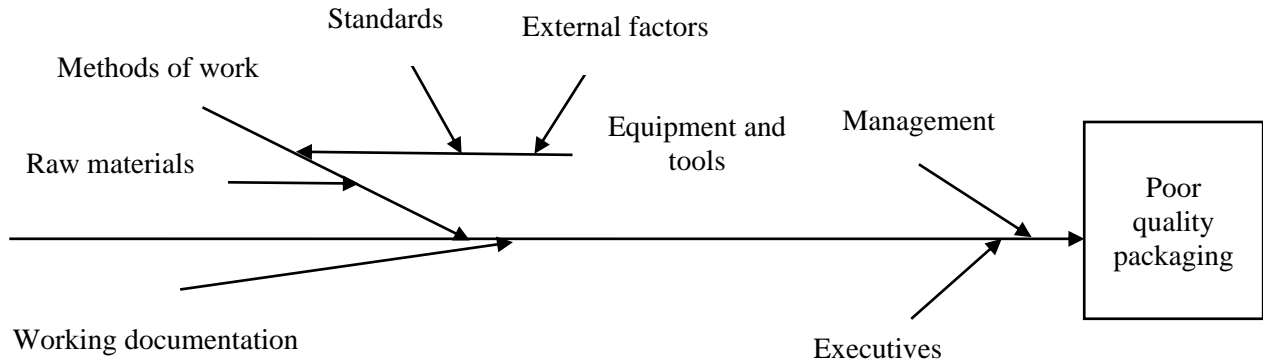


Fig. 8. Ishikawa (Herringbone) diagram for "Arteflex-Toronto Inc"

Source: developed by the authors

In this way, you can get to the root causes of the problem of poor quality packaging, which will eliminate it at that stage. Systematic internal inspections of the functioning of the packaging quality system, continuous staff training, wide implementation of statistical control methods are necessary.

To assess the strategic alternatives of "Arteflex-Toronto Inc's" competitive policy, it is necessary to compile a list of key problems of the current market situation and outline the main actions to address them (Table 9).

Table 9

"Arteflex-Toronto Inc" Strategic Competition Policy Alternatives

Conditions	w _i	Actions
Unsatisfactory supply conditions at existing strength	3	<ul style="list-style-type: none"> ➤ Achieve greater discounts; ➤ Achieve better conditions for commodity lending; ➤ Diversify suppliers; ➤ Conclude medium-term and short-term supply contracts.
Low customer orientation of the consulting company	1	<ul style="list-style-type: none"> ➤ Increase the number of sales managers; ➤ Directly link the benefits of sales managers with the level of customer satisfaction; ➤ Improve the CRM system to the specifics of "Arteflex-Toronto Inc"
Lack of identification in market (low recognition)	4	<ul style="list-style-type: none"> ➤ Implement a brand management system.
Buyers' indifference to the products of the consulting company	2	<ul style="list-style-type: none"> ➤ Informing consumers about real and possible benefits; ➤ Repositioning and modification of goods; ➤ Removal from substitutes.

Source: generated by the authors.

To determine the key vector of competition policy "Arteflex-Toronto Inc" it is advisable to use the table-test of the German economist Wildeman (Table 10).

The best vector of competition policy for "Arteflex-Toronto Inc" is a focus strategy to gain a strong niche position, focusing on highly specialized high-quality market segments to create a unique advantage. However, it is impractical to increase the strategic management area of the company. To eliminate the identified problems with packaging, it is proposed to use the Ishikawa approach, the main feature of which is the participation of employees of all levels of the hierarchy in the management of packaging quality.

Table 10

"Ardenflex-Toronto Inc" Competition Policy Table-Test according to Wildeman's table-test

Analysed characteristics		The type of competition strategy of the consulting company		
		Focusing	Differentiation	Cost Leadership
Market peculiarities	Variety of products in the market	■	▲	◆
	Large market size	◆	■	▲
	Market growth rates	▲	■	◆
	Variability of demand	▲	▲	◆
The importance of competitiveness factors	Costs	◆	■	▲
	Service	▲	■	◆
	Quality	■	■	◆
	Flexibility	▲	▲	◆
	Advancement in innovations	▲	▲	■

Note: Symbols: The appropriate factor is important for each type of strategy: ◆ – small; ■ – average; ▲ – large.

Source: generated by the authors.

CONCLUSIONS

Increasing the dynamism of competition is a characteristic peculiarity of the modern international economic environment. Under conditions of permanent change of environmental factors influence and growth of risks, the question of the analysis of a competition policy of the consulting company of technical design and engineering taking into account specifics of sphere of activity becomes more and more relevant.

In the first section the essence of the concept and peculiarities of the competition policy of an international consulting company was revealed, which, considering the latency and non-immanent property, can be described as a relative concept that operates not only in a particular market segment, but also tied to a time interval. Influence factors and key modern IT systems for the competition policy analysis were considered, and also the block diagram of the competition policy concept of the consulting company of technical design and engineering was offered.

In the second section the characteristics of the international market of consulting services in the field of technical design, maintenance and engineering were outlined; the main directions of export of this type of services (EU countries, USA, Japan, Russia, China, India, Turkey) were determined and it was found that the import of consulting companies is geographically similar to exports. At the same time, the largest share among B2B customers is occupied by industrial companies (32%), and only 5% – by commercial. In addition, the competition policy of an international technical design and engineering consulting company was analyzed on the example of "Artaflex-Toronto Inc"; the impact of competition action of suppliers on the company's activities is calculated, which showed a significant probability of strengthening the monopoly position of suppliers and the need to reduce the company's resource dependence due to the high probability of rising prices of supplies. Areas of activity of "Artaflex-Toronto Inc's" main clients were also studied; the Herfindahl-Hirschman monopolization index (HHI) and the level of market concentration are calculated; the hypothesis of poor quality packaging dependence and sales according to the Kolmogorov-Smirnov criterion was tested, and was not confirmed.

In the third section, based on the Delphi method and the Ishikawa diagram, the implementation of a focusing strategy to gain a strong niche position in highly specialized segments of the high quality market was recommended as a relevant competition policy.

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