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METHODOLOGICAL PROVISIONS OF COMPLEX MARKETING ANALYSIS AND DEVELOPMENT FORECAST OF TRADE EQUIPMENT MARKET

МЕТОДИЧНІ ПОЛОЖЕННЯ КОМПЛЕКСНОГО МАРКЕТИНГОВОГО АНАЛІЗУ ТА ПРОГНОЗУВАННЯ РОЗВИТКУ РИНКУ ТОРГІВЕЛЬНОГО ОБЛАДНАННЯ

Urgency of the research. The rapid pace of trade equipment (TE) market development and high degree of its dynamism determine the need for complex marketing analysis and development forecast of this market in order to provide the management of industrial enterprises with the necessary information for the adoption of effective management decisions.

Target setting. An analytical assessment of the TE market requires the development of an effective research methodology taking into account the specifics and peculiarities of its development.

Actual scientific researches and issues analysis. The issues of the use of TE in the work of modern retail facilities are considered by such authors as: V. Apopiy, P. Balaban, I. Kopych, O. Nestulya, N. Sytnyk and others. A significant contribution to the research of market analysis has been made by such scholars as: I. Ansoff, N. Butenko, A. Voichak, V. Herasymchuk, O. Zozulov, F. Kotler, Ye. Krykavskiy, N. Kosar, S. Kosenkov, O. Mnych, A. Pavlenko, V. Poltorak, A. Starostina, A. Fedorchenko, N. Chukhraj and others.

Uninvestigated parts of general matters defining. However, scientists do not pay enough attention to the research problems of the TE market, in particular, the development of a methodology of complex analysis and development forecast of this market.

The research objective. The purpose of the article is to develop methodological principles for analysing and forecasting the development of the TE market

The statement of basic materials. The article deals with the particularities of the TE market. The methodical approach of analysis and development forecast of the studied market are substantiated and the structural-logical scheme of its analytical estimation is proposed. The directions, methods and objects of analysis are specified for each of the sub-stages of the research of the TE market.

Conclusions. The implementation of complex analysis and development forecast of TE market in accordance with the methodology proposed in the article will allow the management of industrial enterprises-manufacturers of TE to determine the target markets, as well as to form an effective strategy of innovative development and the mechanism of its realization.

Keywords: marketing analysis; research methodology; market development forecast; trade equipment market; industrial enterprise.

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Актуальність теми дослідження. Швидкі темпи розвитку ринку торговельного обладнання (ТО) та високий ступінь його динамічності зумовлює потребу комплексного маркетингового аналізу і прогнозування розвитку даного ринку з метою забезпечення керівництва промислових підприємств необхідною інформацією для прийняття ефективних управлінських рішень.

Постановка проблеми. Аналітичне оцінювання ринку ТО потребує розробки дієвої методики дослідження із врахуванням специфіки та особливостей його розвитку.

Аналіз останніх досліджень і публікацій. Питання використання ТО в роботі сучасних закладів торгівлі розглядають такі автори як: В. Апопій, П. Балабан, І. Копич, О. Нестуля, Н. Ситник та ін. Вагомий внесок у дослідження процесу маркетингового аналізу ринку зробили такі науковці як: І. Ансофф, Н. Бутенко, А. Войчак, В. Герасимчук, О. Зозульов, Ф. Котлер, Є. Крикавський, Н. Косар, С. Косенков, О. Мних, А. Павленко, В. Полторак, А. Старостіна, А. Федорченко, Н. Чухрай та інші.

Виділення недосліджених частин загальної проблеми. Проте науковцями недостатньо уваги приділяється проблемам дослідження ринку ТО, зокрема розробці методики комплексного аналізу та прогнозування розвитку даного ринку.

Постановка завдання. Метою статті є розробка методичних засад аналізу і прогнозування розвитку ринку ТО.

Виклад основного матеріалу. У статті розглядаються особливості ринку ТО. Обґрунтовується методичний підхід аналізу і прогнозування розвитку досліджуваного ринку та пропонується структурно-логічна схема його аналітичного оцінювання. Конкретизуються напрямки, методи та об'єкти аналізу для кожного з підстапів дослідження ринку ТО.

Висновки. Здійснення комплексного аналізу і прогнозування розвитку ринку ТО відповідно до запропонованої у статті методики дозволить керівництву підприємств-виробників ТО детермінувати цільові ринки, а також сформуувати дієву стратегію інноваційного розвитку та механізм її реалізації.

Ключові слова: маркетинговий аналіз; методика дослідження; прогнозування розвитку ринку; ринок торговельного обладнання; промислове підприємство.

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Urgency of the research. Under present marketing conditions trade plays an important role in the development of world economic relations and in the formation of Ukraine's economic potential. Today, trade is one of the leading sectors of the national economy, and in 2016 it was ranked first in Ukraine's GDP, where its share amounted to 13.9% (331.8 billion UAH) [1]. On the other hand, the rapid development of orderly trading and modern trade formats has given an impetus to the formation and development of the trade equipment (TE) market. According to the results of 2016, the size of the TE market of Ukraine is estimated to be from 1.5 to 2 billion UAH, and its average annual increase is about 10-20% [1]. The TE market is one of the most promising and dynamic markets in Ukraine. At the same time, it should be noted that the efficiency of the functioning and competitive ability of industrial enterprises in this market depends largely on the availability of accurate and reliable information on the state of the market, its development and competition. Taking this into account, particular attention is paid to carrying out a complex market analysis and development forecast of the TE market that is capable of providing the industrial enterprise with high-quality, reliable, complete, accurate and up-to-date information, which will become the basis for making managerial decisions.

Target setting. An important aspect of conducting TE market research is the development of a methodology for complex analysis and development forecast of this market. In spite of a great amount of operating time related to the formation of a theoretical and methodological base and practical recommendations for conducting the analytical research of the industrial market in Ukraine and abroad, most researchers neglected the TE market as such. Accordingly, in the modern economic literature there is no effective method for evaluating the TE market, which will take into account the specifics and peculiarities of the development of the studied market. Thus, the necessity of further development of theoretical, methodological and applied provisions of the TE market analysis explains the urgency of the chosen topic and stipulates a research in this direction.

Actual scientific researches and issues analysis. The organization processes of modern trade and the peculiarities of the TE use in trading institutions are monitored by such scholars as: V. Apopiy, P. Balaban, I. Kopych, O. Nestulya, N. Sytnyk, and others. They overview the peculiarities of technical support of trade and technological processes of customer service, selection features, deployment, exploitation and maintenance works of TE enterprises, etc. [2; 3]. However, in the studies of above-mentioned authors, the insufficient attention is paid to the problems of TE market analysis. Various aspects of the process of market research are highlighted in the works of leading foreign and Ukrainian researchers, including: I. Ansoff, N. Butenko, A. Voichak, V. Herasymchuk, O. Zozulov, O. Kuzmin, F. Kotler, Ye. Krykavskiy, N. Kosar, S. Kosenkov, O. Mnych, A. Pavlenko, V. Poltorak, A. Starostina, A. Fedorchenko, N. Chukhraj and other well-known authors, indicating the urgency of the subject under consideration and its interest from the researchers.

Uninvestigated parts of general matters defining. At the same time, it should be noted that the analysis of literary sources, devoted to the study of this issue [2; 3; 4; 5; 6; 8, etc.], gives an opportunity to assert the insufficient coverage of certain issues, in particular: in the researches of some scientists there is no generally accepted approach to the method formation of complex marketing analysis and to the forecast of market development, including the industrial one; the majority of scientific works do not fully consider the range of problems of using the system of indicators for conducting marketing research; the TE market generally as of today is not sufficiently studied. As the research showed, this is primarily due to the complexity and diversification of the market, therefore, the TE market analysis is a promising research direction and needs special attention from scientists.

The research objective. The purpose of the article is to determine the peculiarities of the TE market and the specifics of conducting research in this market, as well as to develop a method for a complex analysis and development forecast of the TE market, which will allow the management of industrial enterprises to carry out an objective assessment of the market environment and promptly respond to changes in the market.

The statement of basic materials. Market analysis is one of the most important components of the marketing support system for the innovative development of enterprises-manufacturers of TE. Herewith, the key aspects that should be included in the TE market analysis are the study of general trends in the market development dynamics in recent years, as well as the characteristics of innovative

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processes that took place there in the relevant period. It should be noted that by investigating the tendencies of the TE market development, one must take into account the fact that this market is industrial and characterized by certain features that distinguish it from the consumer market, among which, in our opinion, the most attention deserves the «pattern of demand». As the demand for trade equipment is secondary, the sale of products in the market under investigation greatly depends on the actual demand of trade enterprises. At the same time, retail companies affect not only the sales of TE, they also determine directions of innovation implementation in the industry. Taking this into account, the methodology for analyzing and forecasting the development of the TE market should be comprehensive and cover not only the analysis of the TE market and the basic tendencies in the implementation of innovations by enterprises, but also the research of the retail market as the main consumer of the TE and the sources of innovations. Therefore, based on a conducted research, a unique technique of TE market analysis was developed, which involves the implementation of preliminary and direct TE market analysis, as well as an assessment of innovative processes inherent in the market under investigation. The logical chart of complex analysis and development forecast of the TE market is presented in Fig. 1.

According to the proposed analysis methodology for TE market, *the first step of the study (preparatory)* stipulates defining the purpose, goals and objectives of the analysis, outlining the object of analysis, as well as the choice of methods of analysis and information sources. It should be noted that the main purpose of conducting a TE market analysis is to provide the management of industrial enterprises with the information necessary for making decisions on the conduct of the competition policy in the TE market, necessary for the development of new segments (niches) of the market, necessary to choice directions of innovations' implementation to the TE production and formation based on the analysis results of the innovation development strategy of TE enterprises-manufacturers.

At the macro-level, marketing research of the TE market should identify and model regularities and trends of the industry development, assess the market situation, determine the market capacity, and provide a forecast estimation of demand for the main types of TE.

At the micro-level, assessments, as well as the analysis and forecast of the capacity of TE enterprises-manufacturers (their potential and competitiveness), the state and prospects of the development of that segment of the market, where the particular enterprise functions, are made.

The main tasks of TE marketing analysis should be taken into account, in particular: analysis of the influence of macro- and micro-environment on the activities of TE enterprises-manufacturers; information collection and analysis on potential, TE market capacity, competition and pricing policies; analysis of internal capabilities of TE enterprises-manufacturers, their strengths and weaknesses; assessment of innovation activities of TE enterprises-manufacturers and directions towards its improvement, etc.

In modern understanding, the TE market is a set of socio-economic relations associated with the purchase and sale of equipment for trade. As to the concept of «trade equipment» (or «equipment for trade»), it should be noted that this is a general category that refers to the equipment used by trade institutions to perform operations of acceptance, storage, movement of goods, their calculation, preparation for sale and direct realization.

As the research showed, two agents interact in the TE market in its simplest form: the buyer (consumer) of the TE, represented by wholesale and retail enterprises, as well as restaurant facilities, and the seller (manufacturer) represented by enterprises producing various types of TE. From marketing point of view, the central place in any market is given to the consumer. At the same time, as the research showed, the largest consumers of TE are retail companies. Considering this, significant attention should be paid to the study of the TE market in order to monitor the patterns of retail market development.

Particular attention should also be given to the fact that the majority of Ukrainian TE enterprises-manufactures sell their products not only in Ukraine, but also abroad. According to the analysis of the activities of leading Ukrainian TE enterprises-manufactures, the consumers of the Ukrainian TE are retail companies from Latvia, Lithuania, Belarus, Russia, Moldova, Kazakhstan, Romania, Georgia, Azerbaijan, Armenia, Kyrghyzstan, Spain, Croatia, France, Slovenia, Austria and other countries. Tak-

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ing this into account, *the second step (main) of the TE market analysis* should begin with the study of key trends in the development of retail market.

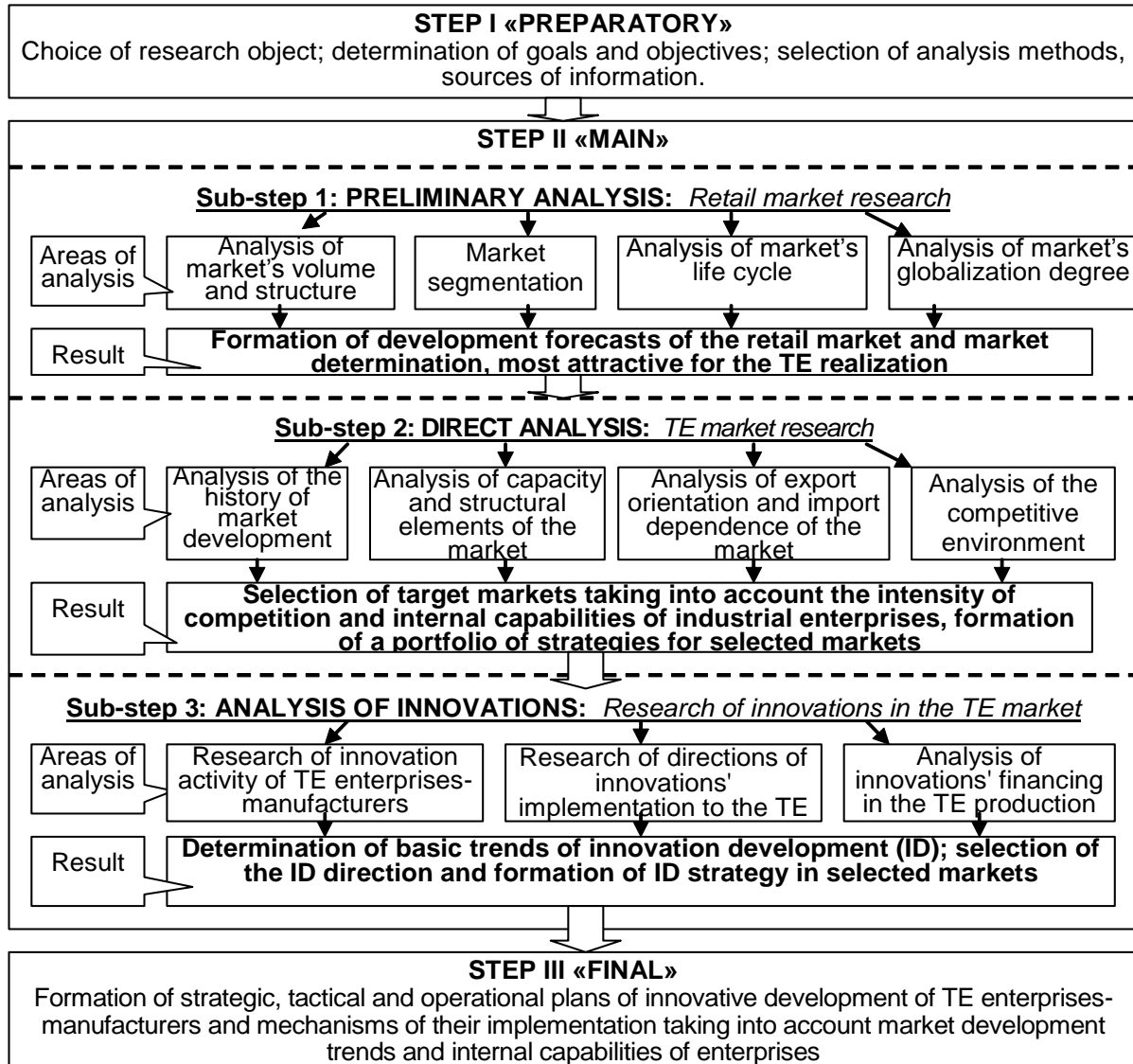


Fig. 1. Structural-logical chart of complex analysis and development forecast of the TE market
Source: created by the authors

According to the developed methodology, the first sub-step of the main step of the TE market research - *preliminary analysis* - involves the analysis of the retail market in Ukraine and in the world. For this sub-step, as well as for the next two, the main directions of the research were outlined, the appropriate methods and indicators for the analysis were selected, and the objects of the research were concretized (Tab. 1).

As can be seen from Table 1, within the framework of the first sub-step of the study, it is stipulated to carry out the ABC analysis of the world's largest retail enterprises in order to identify market leaders that have the greatest influence on its functioning and on the innovations' implementation. In accord-

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ance with the method of ABC analysis, it is necessary to distribute the largest world retail enterprises into the groups: A, B and C under two criteria: by the number of retail enterprises and by the volume of retail trade turnover. According to this distribution, group A should include retail enterprises with the largest share of retail turnover and, accordingly, occupy the largest share of the market, while groups B and C, respectively, have retailers with smaller shares of retail trade turnover.

Table 1

Specification of directions, methods and objects of analysis for the first sub-step of TE market research

Areas of analysis	Methods of analysis	Objects of analysis
Analysis of market's volume and structure	ABC-analysis	- volume of retail turnover of enterprises-retailers in Ukraine and in the world; - main players in the Ukrainian and world retail market, their ratings in terms of retail turnover and number of stores; - number of retail stores; - size of the retail space of establishments, etc.
Market segmentation	Clustering	- by geographical principle; - by commodity specialization; - by format of trade, etc.
Analysis of market's life circle	GRDI	- size of the market; - risks of entering the market; - market saturation; - time limits.
Analysis of the degree of market globalization	Expert assessments	- share of turnover from foreign operations; - number of covered countries; - share of companies operating in more than 1 country.

In order to analyze the market's life circle, we suggest using the global trade development index GRDI (Global retail development index) - an indicator proposed by the international consulting firm A.T. Kearney [7] to determine the attractiveness and life circle of retail markets in different countries. The basis for its calculation is the methodology, according to which, with the help of expert assessments for each individual country, the following indicators are calculated: the market attractiveness (the larger the size of the market, the more attractive it is), the risks of entering the market, its saturation and time limits. Each of these indicators is assigned with a value between 1 and 100%. Each of the described indicators has a weight of 0.25, which is 25%. Thus, GRDI is calculated as an integral index, which is, as the sum of all the indicated indicators taking into account their weight:

$$GRDI = 0,25 \times MA + 0,25 \times CR + 0,25 \times MS + 0,25 \times TP, \tag{1}$$

where: *MA* – market attractiveness, size;
CR – country risks;
MS – market saturation;
TP – time pressure.

Calculated GRDI values range from 0 to 100%. Moreover, the greater the value of GRDI is, the higher the level of retail trade development.

Equally important areas of analysis of the retail market is its segmentation according to the criteria presented in Table 1, as well as an assessment of the degree of globalization through calculated indicators and expert assessments of industry.

The result of preliminary analysis is the outline of main trends of the retail market in Ukraine and the world, formulation of forecasts for its development, and the determination of markets, most attractive for the TE realization implementation, taking into account their life circle, the degree of globalization and other factors on which the geography of TE sales depends.



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The second sub-step of the main step of the market research is a *direct analysis*, that is, an analysis of trends and processes of TE market development (Tab. 2).

Table 2

Specification of directions, methods and objects of analysis for the second sub-step of TE market research

Areas of analysis	Methods of analysis (indicators)	Objects of analysis
Analysis of the history of market development	Retrospective analysis (number of TE manufacturers, ratio of volumes of production and volumes of TE import, TE qualitative characteristics at different steps of market development).	- periods of TE market development in Ukraine, peculiarities and characteristics of each of steps of development of the studied market; - comparison of domestic and foreign experience of formation and development of the TE market.
Analysis of capacity and structural elements of the market	Economic and statistical methods; factor analysis (volume of production and TE realization, capacity of the TE market, trade balance).	- demand for trade equipment; - TE supply; - market prices.
Analysis of export orientation/ import dependence of the market		- volume of TE export; - volume of TE import; - business geography of TE manufacturers.
Analysis of the competitive environment	Herfindahl-Hirschman method; SWOT-analysis (production volumes and market share of competitors, number of employees, production capacity, gross income, etc.)	- intensity of competition; - performance indicators of major competitors for each type of TE; - comparative characteristics of market participants, analysis of competitiveness; - strengths, weaknesses, opportunities, threats.

As the research has shown, an important analysis aspect of the competitive environment in the TE market is the study of competition intensity. There are many methods for determining the degree of competition and monopoly power in the market, the most famous of which are the Lerner index (L), the Herfindahl-Hirschman index (HHI), the concentration ratio (CR), and others. However, in order to study the intensity of competition in the TE market, in our opinion, the most convenient method is to determine the Herfindahl-Hirschman index, which is calculated as the sum of squares of market shares of every firm in the industry by the following formula [8, p.116]:

$$IHH = \sum_{i=1}^n P_i^2 = P_1^2 + P_2^2 + \dots + P_n^2, \tag{2}$$

where: P_i^2 – squared market shares of the i firm;
 n – number of firms on the market.

The Herfindahl-Hirschman index is the most aggregate indicator of the market, which takes into account both the number of enterprises and the instability of their market position.

The main results of the direct analysis of the TE market are the establishment of general tendencies in the development of the TE market, the assessment of market trends and the formulation of forecasts for its development for the next 3-5 years, the identification of key success factors. The most effective ways of conducting competitive policy in the market and the possibility of entering new markets are determined, the selection of target markets and market niches is carried out.

The third sub-step of the main step of the market research is *the analysis of innovations*, which involves studying key trends and patterns of innovation development of TE enterprises-manufacturers. This sub-step, in accordance with the proposed methodology for market research, includes three main areas of analysis (Tab. 3).



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The analysis of innovations also includes the study of world trends, the implementation of innovations in the TE production and the assessment of capabilities of domestic TE enterprises-manufacturers to introduce innovations that are in demand in the world market.

Table 3

Specification of directions, methods and objects of analysis for the third sub-step of TE market research

Areas of analysis	Methods of analysis	Objects of analysis
Research of innovation activities of TE enterprises-manufacturers	Economic and statistical methods, expert assessments	- share of innovative active TE enterprises-manufacturers in the total number of industrial enterprises of the studied industry; - distribution of TE enterprises-manufacturers according to the directions of innovation implementation; - share of industrial enterprises that sold innovative products.
Research of implementation directions of innovations in the TE production		- number of new introduced technological processes, newly acquired technologies used in the TE production, their characteristics; - number of introduced innovative products, their share in the total volume of produced TE, volumes of sales of innovative products.
Analysis of innovations' financing in the TE production		- volume of expenses of TE enterprises-manufacturers, directed on financing processes aimed at innovations' introduction; - distribution of expenses according to the directions of innovation implementation; - distribution of expenses on innovations by sources of funding.

The result of the conducted analysis of innovations in the TE market is the determination of basic tendencies of innovative development of TE enterprises-manufacturers in Ukraine and in the world, the choice of directions and the formation of a strategy of innovation development of TE enterprises-manufacturers for selected markets.

The third, final stage of complex analysis and development forecast of the TE market involves the formation of strategic, tactical and operational plans of innovation development of TE enterprises-manufacturers, taking into account trends of market development and internal capabilities of industrial enterprises of the investigated industry, the formation of a set of strategies for certain groups of TE enterprises-manufacturers depending on their place in the market and competitiveness, as well as the formation of functional strategies necessary for implementing an innovation development strategy.

Conclusions. By analyzing the TE market in accordance with the proposed methodology, in compliance with the sequence of steps and sub-steps of the study, the management of industrial enterprises will be able to: identify the most attractive markets for the TE implementation and predict their development, taking into account market factors; select target markets (market niches) based on the intensity of competition and internal capabilities of industrial enterprises, model their own behavior on them in accordance with forecasts of changes in the market; form the strategy of innovative development of TE enterprises-manufacturers for selected markets, the most acceptable in modern management conditions, and form the mechanism of its realization, which, in turn, will allow to obtain a certain competitive advantage and use it for gaining a leading role in selected markets.

At the same time, it should be noted that, the list of indicators and methods of their calculation may change while maintaining the methodological scheme of market analysis in general depending on the objectives, tasks and features of the analysis of the TE market, in particular the depth of the market assessment, based on specific market objects, TE types and factors of influence, and also considering the availability or absence of information for the assessment of individual factors of TE market development.

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