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# The influence of factors and conditions on export efficiency of Russian SMEs: Strategic and methodological aspects

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## Abstract

Entering foreign markets is an important area of strategic development for SMEs. It allows you to secure higher growth rates, expand the use of limited but often unique resources, gain access to key strategic partners, extend the life cycle of products, diversify risks, etc. Like any strategic decision, the organisation of export activities requires a thorough analysis of internal and external factors, both favorable and unfavorable, in order to justify the choice of the most promising and appropriate markets, to adapt your products or services to them, to assess their competitiveness, and to develop strategies for entering and promoting the selected markets. Recent years have seen many significant changes in the composition and nature of these influences. Therefore, the purpose of this article is to identify and structure the factors that influence the performance of Russian export-oriented SMEs, as well as to substantiate the methodological tools for assessing such influence in order to make informed strategic decisions. A comparative analysis of the factors influencing the efficiency of Russian SMEs in foreign markets was carried out with a view to assessing their export potential. The analysis is completed by highlighting the risks and opportunities associated with the spread of digital technologies and the introduction of sanctions restrictions. A classifier of factors and conditions affecting the efficiency of export activities is proposed. The structure of the indicator system for assessing the effectiveness of SME export activities has been defined. The SWOT matrix format highlights factors that have a significant impact on the ability and results of Russian SMEs' export activities. A comparative description of methods for assessing such influence is given. The advantages of the cognitive modelling method for reflecting the complex and dynamic nature of the relationships between factors and the outcomes of export activities are demonstrated. The basic rules for constructing cognitive maps are presented.

**Keywords:** export activity, SMEs, efficiency, classifier of factors and conditions, cognitive modelling.

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# 影响因素和条件对俄罗斯中小企业出口活动效率的影响： 战略和方法学方面

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## 简介

进入国际市场对中小企业来说是一个重要的战略发展方向。它可以确保更高的增长速度，扩大有限且常常是独特资源的利用机会，获得关键战略合作伙伴的支持，延长产品的生命周期，分散风险等。与任何战略决策一样，组织出口活动需要仔细分析内部和外部的有利和不利因素，以证明选择最有前途和最合适市场的合理性，调整产品或服务以适应这些市场，评估其竞争力，并制定进入和推广所选市场的战略。近年来，这些因素的构成和影响性质发生了许多重大变化，因此本文的目的是识别和结构化影响俄罗斯出口导向型中小企业绩效的因素，并为评估这种影响以做出战略决策提供方法工具。对影响俄罗斯中小企业在国际市场上绩效的因素进行了比较分析，评估了其出口潜力。分析还突出了与数字技术传播和制裁限制相关的风险和机遇。提出了影响出口活动效率的因素和条件的分类器。确定了中小企业出口活动绩效评估指标体系的结构。在SWOT矩阵中，确定了对俄罗斯中小企业出口活动的可能性和结果有重大影响的因素，并对评估这种影响的方法进行了比较描述。展示了认知建模方法在反映因素与出口活动结果之间复杂和动态关系方面的优势。介绍了构建认知图的基本规则。

**关键词:** 出口活动, 中小企业, 效率, 因素和条件分类器, 认知建模。

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## Introduction

Exporting is an opportunity for the development of small and medium-sized enterprises (SMEs). It is a strategic decision that can lead to new market entry and improved company competitiveness. The advantages of entering foreign markets for SMEs include: higher growth rates, expanded customer bases, increased efficiency (cost reduction) through increased sales, extended product life cycles, risk diversification, enhanced company image, and more [Budkova, 2015; Linder, 2020; Dabić et al., 2020; Calheiros-Lobo et al., 2023]. According to the OECD, SMEs that participate in global value chains tend to be more productive and have higher incomes [OECD SME and entrepreneurship, 2023]. However, this advantage can only be achieved by analysing and exploiting the factors that contribute to effective export performance.

In the majority of cases, when SMEs enter a foreign market and develop an export strategy or plan, the procedure generally follows the sequence of steps used in stra-

tegic planning when selecting a new market. These steps include clearly defining objectives, analysing consumers, assessing the competitiveness of products or services, adapting them to the characteristics of the new market, assessing resource requirements and risks, considering channels and promotion strategy, exploring partnership opportunities in the new market, and so on [Gileva, Galimova, 2016]<sup>1</sup>. The alternatives that have traditionally been considered for the implementation of the export strategy are as follows:

- direct export, where all transactions are conducted directly between companies, without intermediaries. This strategy provides a direct link with buyers, facilitates the establishment of closer business relationships, and strengthens the company's image in the foreign market. It also allows for greater control over processes, but requires more resources, including the necessary knowledge of the foreign market;
- indirect exports, which require the involvement of one or more intermediaries between the exporter

<sup>1</sup> See also: Are you export ready? Our guide to planning an export strategy for SMEs (2019). <https://gb.solutions.kompass.com/blog/guide-to-planning-an-export-strategy-for-smes/>.  
5 export strategies for small businesses (2021). <https://seller.alibaba.com/businessblogs/pxfh1ouh-5-export-strategies-for-small-businesses>.

and the final consumers of its products. This approach facilitates market entry and allows for more informed market operations. However, it does not offer the same degree of responsiveness and customisation to customers and partners as the previous strategy.

It is also possible to enter foreign markets through joint ventures and direct investment in production (including assembly) in other countries. A more detailed examination reveals that export strategies can be more varied, depending on the combination of external and internal factors. For instance, [Vanninen et al., 2022] identify four strategies of multinationalisation (a term used by the authors of the cited article to refer to export activities or online sales to a foreign country, as opposed to the broader concept of internationalisation):

- resource-seeking strategy. The objective of resource seekers is to bring minimally viable products to market. They achieve this by drawing on the expertise and assistance of experienced employees, key customers, and other partners. This allows them to transform these products into cutting-edge solutions and innovative technologies for emerging markets. These companies typically operate in knowledge-intensive industries that require active collaboration, including with customers. The resources they require (partners, key customers and employees) are strategic for them and are not always available domestically. As firms develop new offerings that have not been previously sold, it can be challenging to identify suitable partners. The indicator is frequently the response to emerging needs. Therefore, the most appropriate way to implement this strategy is to create subsidiaries and/or hire people directly from the target market in order to start working closely with customers as soon as possible. This strategy represents one of the most time-efficient options for multinationalisation;
- hub-reaching strategy. The primary objective of this strategy is to establish an international presence in proximity to cluster areas or key industry locations with a high concentration of potential customers, investors, partners, and talent. This access allows smaller companies to gain insight into emerging customer needs and modern industry standards, which they can then leverage to reach peripheral markets at an opportune time. The strategy is typically adopted by companies that have already developed their core domestic offerings and are seeking new customers and investors to expand their operations. Additionally, they are seeking new business models to monetise their expertise and technology. The majority of their activities are conducted within the domestic market. International markets are managed directly by selected managers whose objective is to develop relationships with important customers or key partners. Despite the relatively

small number of employees working in other countries, these subsidiaries frequently play a pivotal role in driving the company's growth;

- serendipitous resource-leveraging strategy. The primary objective of the strategy is to identify opportunities for transnationalisation based on the resources and competencies currently available. Typically, the utilisation of resources is driven by short-term capabilities and response strategies, rather than long-term goals and proactive planning. SMEs that adopt this strategy are often start-ups with limited resources. They typically commence operations on a relatively modest scale, utilising home offices and freelance personnel. As resources and experience are accumulated, growth is pursued in a gradual manner. It is important for businesses to meet customers and partners at various industry events and trade fairs, as well as make active use of digital communications;
- controlled-expansion strategy. The strategy's core objective is to initially absorb technology, develop products and establish production in the domestic market. This is followed by a cautious and gradual expansion into other regions. Such companies typically require time to build a robust and competitive position in their home markets. They only begin to pursue international growth when these markets reach a point of decline or saturation. The rationale behind a controlled-expansion strategy is typically geared towards optimising operational efficiency and service quality, rather than focusing on the underlying products or technology. Typically, such companies retain all key activities at their domestic head office. The creation of international subsidiaries may be driven by the need to respond rapidly to customer concerns.

The expansion of export strategy opportunities for SMEs is primarily linked to digital opportunities in market analysis, customer interaction formats, global supply chains and partner ecosystems [Denicolai et al., 2021; OECD SME and entrepreneurship., 2023; Higón, Bonvin, 2024]. Furthermore, the number of factors that directly or indirectly affect companies in the digital environment is growing rapidly, as is the pace of change in these factors. [Webb, 2020; Denicolai et al., 2021; Gileva, Shkarupeta, 2022]. As the development of a successful strategy relies on the analysis of combinations of external and internal factors and conditions, the task of assessing their impact on the performance of SMEs becomes all the more important because of the increasing diversity and dynamism of such factors.

In consideration of the aforementioned factors, the objective of this article is to identify and structure the factors that influence the performance of Russian export-oriented SMEs and to substantiate the methodological tools for assessing such influence, with a view to facilitating informed strategic decision-making.

## 1. Theoretical overview

The analysis of factors influencing the performance of export-oriented SMEs in Russia is primarily focused on assessing the export potential of the enterprise [Karachev, 2015]. Table 1 presents a comparative analysis of the approaches used to determine export potential (EP).

As illustrated in the table, the analysis and assessment of export potential primarily considers internal factors, particularly the various types of resources. However, external factors are frequently incorporated into the scope of the analysis and the resulting outcomes. A number of papers examine the constraints that hinder the export activities of SMEs. Such factors include: lack of necessary

production base and opportunities for its expansion, lack of financial and human resources, high cost of borrowed capital, high transport costs, lack of information on sales markets and reliability of foreign partners, insufficient competitiveness of products on foreign markets, complexity of customs procedures and high export duties, certification requirements in the importing country, insufficient legal training in the field of foreign economic activity [Moseiko, Azmina, 2012; Budkova, 2015].

The introduction of sanctions had a profound impact on both SMEs in general and on the volume and nature of foreign economic activity. As indicated by the National Research University Higher School of Economics, the

Table 1  
Analysis of Russian SMEs' foreign market activity factors regarding export potential

Source	Structure of export potential	Additional features
[Karachev, 2015]	Production, financial, marketing and labour resources	Export potential is assessed based on the company's actual achievements and remaining opportunities. There are two levels of export potential: strategic and operational. The specific characteristics of SMEs are not considered
[Sukhikh, Katz, 2015]	Considered as the sum of internal and external export potential. The analysis of internal potential considers the utilisation of the company's resources (natural, labour, material, financial and information), the competitiveness of export products and the efficiency of the company's export activities. The analysis of external potential includes an assessment of external economic factors, the marketing and sales of export products, and the innovative potential of the enterprise	Understanding potential not as a simple set of resources, but as the results of their use. The attribution of innovation capacity to the external component is probably related to the nature of the technology and the development of the open innovation model. SME specifics are not considered
[Volkova, Karachev, 2016]	Groups of micro-level factors in the structure of export potential: factors of time and scale of operations, factors related to human capital, innovative and production technological development, factors of financial plan, marketing plan. Meso-level factors: factors of spatial location, factors of internationalisation (by attracting foreign experience, knowledge, capital and technology), factors of organisational interaction (clusters and networks); external factors (external economic, political and legal, scientific and technical, geographical)	A wide range of internal and external factors are taken into account. The specific characteristics of SMEs are taken into account
[Mazilov, 2015]	Aspects of the assessment of export potential: state of production, financial and human resources, organisation of marketing and logistics, quality of information resources, share of exports and products certified as complying with international standards in the total sales volume of the company's products	The resource and performance components of export potential are considered. When analysing the financial resources available, potential risks such as non-payment by customers and currency fluctuations are taken into account. The specific characteristics of SMEs are taken into account
[Malysheva, 2019]	Socio-economic factors defined as a group of factors that reflect external market conditions. National and cultural. Productive and technological factors, reflecting the level of technical and technological development of the target country's economy. Political and legal factors, reflecting the political situation in the target country, the existence of protectionism in the industry and administrative barriers, including legal norms and rules for doing business	Export potential is considered in terms of external prospects and barriers to entering the market. The specific characteristics of SMEs are taken into account

adverse effects of sanctions were primarily identified by representatives of small and medium-sized businesses as difficulties in importing raw materials, components, and associated costs, as well as a decline in domestic market demand [Adaptation of Russian industrial..., 2023]. The disruption of logistics chains, problems with settlements, disruption of transactions or breakdown of business relations with foreign partners, and reduction of demand from foreign consumers were identified as significant negative factors by large enterprises, and were also included in the top 10 risks for SMEs. Conclusions of a similar nature, with additional emphasis on the problems associated with the import substitution of software and telecommunications equipment, are presented in the works of [Ivanov, 2023; Koroleva, 2023; Repnikova, Dmitrieva, 2024]. Nevertheless, if we consider SMEs to be the most flexible and mobile agents of the economic system, the sanctions pressure on the SME sector can be regarded as a factor conducive to its development [Repnikova, Dmitrieva, 2024]. In light of the above, the findings of [Adaptation of Russian industrial..., 2023] indicate that a considerable number of SMEs have identified several beneficial outcomes of sanctions, including the potential to cultivate promising market segments for novel product lines and to penetrate new markets with established products. The withdrawal of numerous foreign enterprises from the Russian market has resulted in an increased opportunity for small and medium-sized enterprises (SMEs) to attract qualified personnel. Many SMEs utilise the newly available niches in the domestic market to address existing challenges. However, there are also numerous cases where SMEs adopt a strategy of reorientation towards foreign markets of friendly countries [Koroleva, 2023].

The following factors have also been identified as influencing the efficiency of SMEs' export activities:

1. A systematic literature review revealed that the most commonly cited factors are the qualifications of human capital and managerial skills, innovation and technology, marketing competencies, the experience of SMEs in general and in international markets in particular, knowledge of foreign markets and networking [Elsharnouby et al., 2024].

2. The export performance of SMEs is influenced by a number of factors, including organisational, entrepreneurial, production and market-related considerations [Kasema, 2023]. The results of the empirical analysis also indicate that efficiency is achieved through a combination of factors from all the identified groups.

3. Internal factors influencing firm export performance include firm resources and capabilities, such as experience and diversification of export activities; management characteristics, including export orientation, customer focus, innovation and technology; export marketing strategy, which includes adaptation of products and services to the external market, pricing policy, advertising and sales channels [Faruk, Subudhi, 2019]. The content and characteristics of the export marketing strate-

gy implementation for SMEs are presented in more detail in [Obadia, Vida, 2024].

4. The export performance of SMEs is also influenced by a number of factors, including their export market orientation, the use of entrepreneurial and business networks, and the presence of Total Quality Management (TQM) in SMEs as a basis for ensuring product competitiveness in international markets [Imran et al., 2017].

5. The key factors that drive the export performance of modern SMEs are: access to networks and personnel with networking expertise, effective supply chain management, market analysis and monitoring, product diversification and the use of digital technologies [Elsharnouby et al., 2024]. It is important to note that the impact of diversification on the performance of export-oriented SMEs is not straightforward. Given the limited resources available to them, the most obvious strategy for SMEs to enter foreign markets is specialisation, i.e. concentrating available resources on a specific product or business area. However, the current global high-tech environment significantly increases the risks of failure and loss for such a strategy and limits the growth of SMEs. A diversification strategy helps to mitigate macroeconomic instability by spreading risks. However, decisions on the feasibility and direction of diversification for SMEs require careful analysis and evaluation.

6. In recent years, there has been a notable focus on the impact of digital technology development. They facilitate expansion of business networks, significantly enhance access to information about foreign markets, and enable utilisation of online formats in export activities [Denicolai et al., 2021; OECD SME and entrepreneurship..., 2023].

The pandemic has highlighted the crucial role of digital technologies for the sustained and expanded operations of SMEs, including their capacity to operate in foreign markets. The revolutionary impact of digitalisation provides SMEs with a competitive advantage, enabling them to grow and expand into global markets. This is achieved by optimising business processes, reducing costs and increasing productivity, facilitating networking, significantly expanding market intelligence on foreign markets, and utilising the online sales format in export activities. Content sharing platforms, e-procurement systems, social networks and websites have become essential tools for SMEs, enabling them to innovate, conduct research and development, improve international market research processes through immediate access to relevant information and thus capitalise on new market opportunities. Digital entrepreneurship has enabled SMEs to develop new configurations of activities in the value chain and participate in the development of modular architectures (ecosystems) that are scalable and flexible in their ability to evolve [Denicolai et al., 2021; Rosyidah et al., 2023; Higón, Bonvin, 2024].

However, analysts have highlighted the uncertain impact of technological trends, particularly in the digital technology sector, on the international business ac-

tivities of SMEs [Assessment of integration processes, 2023]. One of the principal constraints on the capacity of (SMEs) to engage in export activities within the digital environment is the dearth of requisite technical skills and knowledge. Another potential obstacle for SMEs is their vulnerability to cyber-attacks, which have increased in recent years. The reason is that SMEs are becoming vulnerable links in business networks that can "open the door" to complex supply chains [OECD SME and entrepreneurship..., 2023].

The final two points – rising macroeconomic instability and the utilisation of digital technologies – are especially relevant for Russian export-focused SMEs in the context of sanctions limitations.

## 2. Methodology and methods

The existence of a range of factors and conditions influencing the performance of export-oriented businesses provides a foundation for developing diverse approaches to analysing the success factors involved in internationalising companies. While these concepts are applicable to a range of enterprises, many researchers focus on SMEs, given that exporting is the initial step in the internationalisation process and represents a relatively straightforward and cost-effective route for SMEs to enter foreign markets. A general overview of the most common approaches to internationalisation is given in [Dabić et al., 2020; Calheiros-Lobo et al., 2023; Elsharnouby et al., 2024] and their summary is presented in Table 2.

Table 2  
Approaches to analysing the factors and conditions affecting the SME export activities

Approach	Essence and characteristics of the approach	Limitations
RBV- resource-based view	This is the most common approach. It is assumed that a business's ability to enter foreign markets and gain competitive advantage is determined by its sustainable and unique resources and capabilities, which require costly replication. Exporting provides SMEs with a unique opportunity to leverage their knowledge assets and expand their knowledge base. When applying the resource-based approach to reach foreign markets, particular attention is paid to geographical location and associated factors such as proximity in terms of language and culture. The resource-based view (RBV) is extended in the knowledge-based view (KBV). The fundamental premise of KBV is that firms possess the organisational capabilities, resources and processes that can be leveraged to create and utilise knowledge assets in the value creation process. It is also crucial for SMEs to be able to transfer knowledge in order to form networks and facilitate technology transfer	The diverse nature of SMEs and their operating environment makes it challenging to identify and define the essential resources required for internationalisation
Network approach	SMEs can successfully undertake international operations by joining a network. Networks, whether formal or informal, provide SMEs with a means of overcoming resource constraints. SMEs rely on external networks to gain access to strategic resources, including knowledge, technology, finance and skills. These networks also facilitate innovation and growth. Networks also provide resilience. Digital platforms are instrumental in facilitating knowledge transfer, scaling and network effects	There is an increasing risk of cybersecurity breaches
Uppsala model	The Uppsala model is a sequential approach that assumes a gradual internationalisation of the firm. The model assumes that there is a lack of knowledge about the external market, which presents a challenge to internationalisation. Accordingly, the firm should initially focus on establishing itself in its domestic market and then gradually expand its presence in the target country, moving to the next stage once sufficient understanding and knowledge of the external market conditions have been achieved. It is often the case that those working in a new market are the first to identify both the threats and the opportunities. Consequently, the most prudent strategy is to export products indirectly with the assistance of external export agents or traders. However, the advent of digital technologies has led to a growing body of evidence suggesting that SMEs are pursuing rapid globalisation despite limited resources	Models of rapid internationalisation based on the capabilities of digital technologies demonstrate that many firms do not follow a phased approach, but rather initiate their international activities from an early stage of their existence. Furthermore, digital technologies facilitate the identification and analysis of promising external markets, eliminating the need for a lengthy trial and error process
Innovation model (I-model)	The internationalisation process is considered in the context of new product development and commercialisation. The internationalisation process typically comprises three stages: the pre-export stage, the export footprint stage (during which exports to geographically proximate countries are initiated), and the advanced export stage (during which exports are expanded to more distant countries). There is a strong focus on organisational learning and support for senior management	Similar to the preceding paragraph

Table 3  
Classification of factors and conditions affecting the efficiency of SME export activities

Factor	Description				
A. Origin	A1. Internal			A2. External	
	A1.1. Resources (natural, material, financial, intellectual, information)	A1.2. Processes (operations, innovation, marketing, logistics)	A1.3. Results (competitiveness of products/ services, experience)	A2.1. Political and regulatory, technological, economic, social	A2.2. Industry and market
B. Impact potential	B1. Fully manageable		B2. Partially manageable		B3. Unmanageable
C. Nature of impact	C1. Direct impact		C2. Indirect impact		
D. Sphere of manifestation	D1. Entrepreneurship	D2. Production	D3. Market	D4. Networks and the 'digital'	D5. Other

The following trends in research on the relationship between factors and conditions and SME export performance are highlighted:

- There is a notable and growing interest in knowledge management in SMEs. This is driven by the increasing opportunities and the growing role of networking and network cooperation. The capacity to

Table 4  
SWOT analysis of factors and conditions affecting the efficiency of Russian SME export activities

Opportunities (drivers)	Threats (constraints)
Development of digital technologies Increased opportunities for networking Government support programmes for SMEs and exports Increased export cooperation with Asia and Africa	High geopolitical uncertainty Sanction restrictions on countries/products to realise export opportunities Supply chain disruptions High cost of debt capital Complex customs procedures and high export duties, certification requirements in importing country Increase in cyber-attacks on SMEs as a weak link in global ecosystems and supply chains
Strengths	Weaknesses
Availability of in-house unique developments Ambition and competence of entrepreneurs and managers	Insufficient competitiveness of products on foreign markets Lack of necessary production base and opportunities for its expansion Lack of financial and human resources Lack of digital skills High transport costs Lack of information on markets and reliability of foreign partners

generate new knowledge makes SMEs an attractive proposition as potential partners. Well-established knowledge transfer processes ensure the efficiency of networking. The preservation and protection of knowledge, on the one hand, and the co-creation of knowledge, on the other, are key factors in determining the competitiveness of SMEs in both domestic and foreign markets;

- growing emphasis on the human capital aspects of SMEs. A high level of human capital is recognised by a large number of researchers and practitioners as a primary factor for the effective internationalisation of SMEs. The human capital involved in the foreign economic activities of SMEs includes the export and entrepreneurial orientation of managers and employees, motivation to work in foreign markets, and the availability of necessary knowledge and competencies in different areas. These include unique knowledge and technologies that support the competitiveness of products and services in international markets, developed digital competencies, knowledge and understanding of promising foreign markets, and more;
- reorienting the geographical focus. This is a crucial consideration for Russian SMEs in light of the sanctions and restrictions [OECD SME and entrepreneurship..., 2023; Elsharnouby et al., 2024].

The approaches presented in Table 2 consider the internationalisation process as a whole and export activities as one of its components from different angles, thus providing a complementary overview. The essence of this complementarity lies not only in the diversity of factors, but also in the fact that they are not static and isolated. Therefore, the model used to assess the impact of factors and conditions on the efficiency of Russian SMEs' export activities should be dynamic and consider the interrelations and interaction of different groups of factors.

Table 5  
System of indicators to assess the effectiveness of SME export activities

Financial indicators	Strategic indicators	Customer satisfaction indicators
1. Sales-related: export sales volume, export sales growth, export sales efficiency	Contribution of exports to company growth Contribution of exports to quality of company management Building network relationships Reputation building	Product/service quality relative to competitors Customer satisfaction relative to competitors Quality of customer relationships relative to competitors
2. Profit-related: export margin, export profitability, export profitability growth		
3. Market-related: export diversification, export market share, export market share growth		

### 3. Results

To gain a structured overview of the factors and conditions that affect the effectiveness of SME export activities, the results of the analysis were classified (see Table 3). The composition of factors that are significant for Russian export-oriented SMEs, taking into account their type (internal or external) and the nature of their impact (facilitating or constraining), is presented in the format of a SWOT analysis in Table 4.

As with the identification of different sets of factors, there is no single approach to defining indicators for assessing export performance. The most common approach is the EXPERF export performance scale, which combines indicators on three aspects: financial performance, strategic performance and customer satisfaction of the exporting firm [Zou et al., 1998]. In this study, we will therefore use a multidimensional approach to assess export performance, combining both financial and non-financial indicators [Carneiro et al., 2016; Sadeghi

et al., 2021]. Table 5 outlines the overarching structure of the indicator system for assessing the performance of export-oriented SMEs.

The analysis allows us to draw a number of significant conclusions that will inform the development of a model for analysing the impact of factors and conditions affecting the efficiency of Russian SMEs' export activities.

Firstly, a significant amount of research in this area is focused on analysing the characteristics and patterns of specific markets. The research findings show that the relative importance of different factors varies depending on the circumstances. However, the fundamental set of factors is largely consistent, as the construction of quantitative models is based on a comprehensive literature review. This analysis also considers the views of entrepreneurs and SME managers, as the sources examined include empirical survey results.

Secondly, the primary factors influencing the relative importance of specific elements are the type of market

Table 6  
Methods for analysing the influence of factors on business performance

	Visibility of relationships	Quantitative estimates	Accuracy of estimates	Consideration of the interaction of factors	Ease of application	Ease of adaptation
Expert assessment	Possible	Possible	Depends on the number and quality of experts	Possible	Depends on the format of the assessment	–
Ishikawa chart	++	–	–	–	++	– +
Factorial analysis	–	++	+	–	+ –	– +
Correlation-regression analysis	–	++	++	– +	–	–
Covariance matrices	– +	+	+ –	– +	–	–
Functional charts (IDEF)	++	–	–	–	–	– +
Cognitive maps	++	+ –	– +	++	–	+



(developed or developing), the country-specific characteristics shaped by a unique combination of external and internal factors, and the nature of the business activity (industry, product/service type). The significance of the factors is also influenced by the stage of export activity. Factors such as market entry and the continuation of successful activities for already established SMEs carry greater weight at this stage.

Thirdly, the effect of factors is complex and contingent on their interaction. Consequently, graphs are frequently employed as the foundation for models designed to evaluate the influence of factors on export performance. One further development of this method is the use of system dynamics models or cognitive models, which are causal graphs with positive and negative feedback loops (Katalevsky, 2015). Subsequently, these models are used as the basis for simulation modelling and the generation of quantitative results. This format seems to be the most suitable for developing a qualitative model to assess the influence of factors and working conditions on the export activities of Russian SMEs.

Therefore, when evaluating the influence of factors and conditions on the performance of SME export activities with a view to identifying the most critical factors for strategic decision-making and assessing their impact, it is essential to consider:

- the presence of direct and indirect influence, as well as the interrelationships and mutual influence of the factors under consideration.
- visualisation, visual representation of the model, allowing a better understanding of the processes in progress and the possibility of organising expert discussions;
- the possibility of obtaining quantitative estimates, even if they are not absolutely precise (since this is hardly possible in view of the continuous and unpredictable changes), for comparative analyses of different scenarios and strategies for the development of SMEs in foreign markets;
- the flexibility and adaptability of the model, taking into account the dynamics of each set of factors.

Let us examine a number of the most common methods used to analyse the impact of various groups of factors on the results of this or that activity. The characteristics and examples of using some of them are provided in [Gorodnova, Haikin, 2009; Glebkova, Kachanova, 2015; Bereza, Bereza, 2022]. A brief comparative analysis of the methods is presented in Table 6.

The majority of the methods under consideration can be classified as either qualitative (mostly graphical) or quantitative (analytical), with the exception of cognitive modelling, which combines the capabilities of both approaches. The expert assessment method, although considered an independent method, forms the basis for many other methods. For example, it is used to create Ishikawa charts (factors are identified, structured, and prioritised), covariance matrices (probabilities are estimated), and cognitive maps. The cognitive map, which is an oriented

graph (or graph), is the foundation of cognitive modelling. Its construction marks the beginning of the entire process. The formal model of a cognitive map is as follows:

$$G = (V, E, X, F),$$

where  $V$  represents a set of vertices,  $E$  denotes a set of arcs connecting vertices,  $X$  signifies a set of vertex parameters, and  $F$  is a function defining the nature of links between vertices. In the simplest case, this function is given by a coefficient reflecting the closeness of such a connection in the range from 0 to 1.

The interaction between factors can be either positive or negative, allowing us to consider the mutual influence of factors in the format of both positive and negative feedback loops. The adjacency matrix reflects all potential connections between vertices. In the absence of a quantified strength of interconnections (i.e., an unweighted graph), the contents of this matrix will be represented by zeros and ones. In the event that the weights of edges are determined (i.e. a weighted graph is created), the matrix will contain the values assigned to each edge. The subsequent phase is to construct simulation models based on cognitive maps [Katalevsky, 2015], which facilitate sophisticated multivariate computations.

In consideration of the characteristics outlined in Table 6, it can be posited that the cognitive modelling method is the most suitable for the purpose of modelling and assessing the impact of external and internal factors and conditions on the export performance of SMEs. The construction of such a model represents a topic for further research.

## Conclusions

The justification of the feasibility and assessment of opportunities for SMEs to enter foreign markets, like any strategic decision, necessitates the analysis and consideration of the impact of external and internal factors on the effectiveness of the actions taken. The growing instability of the external environment and the emergence of new opportunities associated with the advancement and proliferation of digital technologies, on the one hand, and the implementation of extensive sanctions and restrictions, on the other hand, have resulted in a substantial transformation of the operational landscape of Russian SMEs in both domestic and foreign markets. Despite the complexity and ambiguity of the environment, export activities continue to offer Russian SMEs significant opportunities for growth and development. Concurrently, a significant trend is the accelerating pace of SME multinationalisation, with the majority of companies formulating strategies for entering foreign markets shortly after their inception. These strategies encompass sourcing, hub and spoke, and resource utilisation models.

The necessity for expedient decision-making and adaptation to an unpredictable environment necessitates the utilisation of novel analytical tools that supplement the conventional yet static PEST and SWOT analysis methodologies. This article demonstrates the viability and ad-

vantages of employing cognitive modelling to investigate and assess the influence of variables on SME export performance. The model has been created using a classifier of factors and conditions affecting the effectiveness of SME export activities (for the formation of input variables) and a system of indicators for assessing the effectiveness of SME export activities (for the selection of resulting indicators).

The significance of the factors in question is determined by three main factors: the country affiliation of SMEs (a particularly important factor, with the activities of Russian SMEs being significantly impacted by sanctions restrictions), sectoral characteristics and the stage of internationalisation. The latter can be further

broken down into entering a foreign market or continuing successful activities in the existing market. As a result, further research will involve developing several cognitive models. This will eliminate the redundancy of the factors under consideration and provide a clearer adjustment of the parameters to the SME development scenario. Cognitive maps can also be used as a foundation for the development of simulation models, which enable the execution of complex multivariate computations in real-time to evaluate the influence of a network of inter-related variables on the outcomes of export operations for small and medium-sized enterprises (SMEs). This enables the formulation and subsequent refinement of export strategies.

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