

DOI: 10.17747/2618-947X-2024-2-176-185

UDC 334.7+339.94

JEL L11, L22, L23



B2C and B2B platform model-based determinants of Russian industrial companies' strategy choices for entering foreign markets

S.V. Ilkevich¹¹ Financial University under the Government of the Russian Federation (Moscow, Russia)

Abstract

The article presents an overview of a number of parameters and factors influencing the choice and formation of strategies for the entry of Russian industrial enterprises into international markets based on platform models of interaction in the B2C and B2B segments. This focus makes it possible to define and specify in more detail the mechanisms, formats, opportunities and limitations in the development of strategies for the entry of Russian industrial enterprises into international markets, supported by platform models of interaction. In the context of building international platforms for industrial companies, aspects of the specifics of platform interaction have been identified. A list of twelve determinants is proposed, how to choose a strategy of entering foreign markets by Russian industrial enterprises based on the mechanisms of platform interactions. The fact is that in the current conditions of the platform economy, value creation is the result of a new combination of information, physical products and services of various types, as well as new ways of configuring transactions and reconfiguring resources, relationships between suppliers, partners and customers. For Russian industrial enterprises, methodological developments in this area can be particularly useful in the context of increasing the internationalisation of business activities using international B2C and B2B platforms. At the same time, a major difficulty in determining the parameters and priorities of platform interaction between industrial companies, especially in the B2B segment (including in the framework of industrial asset sharing models), is the fact that this type of interaction is still a frontier today in many industrial sectors at the national level, and even more so at the international level. As best practices and success stories of Russian industrial companies entering international platforms emerge, and as the platforms themselves evolve, it will be possible to talk about greater operationalisation and measurability of the determinants of Russian industrial companies' strategy choices. At the current stage of development of international manufacturing platforms, greater awareness of the productivity drivers and determinants of industrial enterprises' strategic choices will enable platform complementors and the platforms themselves to better find common ground and ensure faster growth of network effects.

Keywords: platforms, ecosystems, network effects, Fourth Industrial Revolution, industry 4.0, smart manufacturing, industry, digital technologies, digital transformation, sharing of industrial assets, equipment as a service, marketplaces.

For citation:

Ilkevich S.V. (2024). B2C and B2B platform model-based determinants of Russian industrial companies' strategy choices for entering foreign markets. *Strategic Decisions and Risk Management*, 15(2): 176-185. DOI: 10.17747/2618-947X-2024-2-176-185. (In Russ.)

基于B2C和B2B平台模型的俄罗斯工业企业选择出口战略的决定因素

S.V. Ilkevich¹¹ 俄罗斯联邦政府财政金融大学 (俄罗斯, 莫斯科)

简介

本文讨论了影响俄罗斯工业企业基于B2C和B2B平台互动模型选择和制定出口市场策略的多种参数和因素。这种聚焦视角有助于更详细地确定和具体化俄罗斯工业企业基于B2C和B2B平台互动模型开发出口市场策略时的机制、格式、机会和限制。在建立工业公司国际平台的背景下, 揭示了平台互动特定方面的特点。提出了一个在构成和考虑方面相对综合的十二个决定因素列表, 用于基于平台互动机制选择出口市场策略的俄罗斯工业企业。在当前的平台经济条件下, 价值创造是信息、物理产品和各种类型互补产品的新组合的结果, 以及新的交易配置和资源重构的新机会, 涉及供应商、合作伙伴和买家之间的关系。对于俄罗斯工业企业, 在提升经济活动国际化方面, 特别是通过国际B2C和B2B平台, 这些方法论开发在这一领域可能尤为有益。同时, 确定工业公司平台互动参数和优先级的难度相当大, 特别是在B2B领域 (包括工业资产共享模式), 不仅在国家层面, 甚至在国际层面, 这类互动在当前许多工业领域仍然处于前沿地位。随着俄罗斯工业公司进入国际平台的最佳实践和成功案例的形成, 以及平台本身的演变, 我们将能够更加具体和可衡量地讨论俄罗斯工业公司选择战略的决定因素。当前国际生产平台发展阶段, 提升对生产力因素和工业企业战略选择决定因素的认识, 将有助于平台的补充组件和平台本身更好地找到接触点, 并促进网络效应的更快增长。

关键词: 平台、生态系统、网络效应、第四次工业革命、工业4.0、智能制造、工业、数字技术、数字转型、工业资产共享、设备即服务、市场平台。

引用文本:

Ilkevich S.V. (2024). 基于B2C和B2B平台模型的俄罗斯工业企业选择出口战略的决定因素. 战略决策和风险管理, 15(2): 176–185. DOI: 10.17747/2618-947X-2024-2-176-185. (俄文)

Introduction

Over the past 15 years, there has been a notable uptake of advanced digital technologies in the industrial sector. This has led to changes in internal processes and, subsequently, an increase in operational efficiency and modernisation of production facilities for many enterprises. It is also important to consider the significant impact that digital technologies have on a company's competitiveness, including the effect of network effects. The adoption of digital technologies has the potential to bring about significant changes to the business environment, thereby enhancing competitiveness for all enterprises within the industry. The deployment of digital technologies allows the creation of premium products with advanced features. The pace of digital transformation is accelerating, with all stakeholders in industrial transformation and digitalisation engaged in broader ecosystems and platforms. For industrial companies, the fundamental principle remains consistent with that observed in well-known B2C platforms and ecosystems: the larger the pool of participants (complementers), the higher the network effects, under similar circumstances. However, the transition to cross-

border platforms for industrial enterprises is challenging due to a number of factors. The formation of international industrial ecosystems and platforms is not so much constrained by legal issues as it is by a number of internal contradictions inherent in the platforms and ecosystems themselves. These relate to the balance of interests of the parties involved and the distribution of benefits along the value chain.

In order to develop effective strategies for entering foreign markets, Russian industrial enterprises must first gain a comprehensive understanding of the current and prospective mechanisms of partnership and ecosystem interaction in platform models of business internationalisation. The current literature, both domestic and international, has extensively and comprehensively studied general and conventional instruments for supporting exports, including non-resource non-energy goods in new markets [Morozhenkova, 2019]. However, the potential of building platforms and ecosystems has only recently begun to be partially addressed. Despite this, an increasing number of sectors and industries are turning to platforms and ecosystems as a new form of industrial

organisation. It is important to consider ecosystems when the multilateral relations underlying a value proposition cannot be decomposed into multiple bilateral relations. In such cases, viewing the situation as a series of bilateral relations may result in the observer missing crucial aspects of the situation [Adner, 2017]. Platform manufacturing represents a significant shift in the way production is planned and executed.

It is becoming increasingly challenging for companies to ascertain the identity of the parties responsible for manufacturing their components. Similarly, it is not always the case that the manufacturers of these components have the necessary equipment. Furthermore, there is an increasing trend towards the transfer of knowledge and decision-making authority across organisational boundaries [Tolio et al., 2023].

However, the research direction in the field of mechanisms and advantages of ecosystems and platforms for interaction between industrial enterprises at the international level is even more multifaceted and multiparametric, and also involves a larger number of interdependent entities. The research in this area is relatively new and tends to focus on specific topics. For instance, there is a growing body of work examining the potential for ecosystems and platforms to optimize the balance of total costs and carbon footprint in the production, storage and distribution of products in an international regulatory environment that includes emission restrictions and trade policy [Mishra & Singh, 2019]. Despite the critical importance of these specific issues, researchers have not yet fully explored the potential for a more comprehensive understanding of how ecosystems and platforms are transforming into a fundamentally new form of industrial organization for industrial enterprises and, accordingly, what prospects for business development arise in this regard from the point of view in terms of principles of interaction and restructuring of business models.

Separate layers of research highlight the importance of ecosystem coordination and ownership, as well as the presence of competing participants and formats for involving various types of complementors, in the international context. These findings are particularly pertinent at the ecosystem level. The productivity of interaction between platform owners and complementors [Uzunca et al., 2022], data ownership and open exchange, and the relationship between various operators at the ecosystem level [Kokkonen et al., 2023] are becoming especially important at the ecosystem level.

Another promising avenue of research is the study of how value is created in the digital interactions of transnational corporations (MNCs) when combining the global reach of MNCs, the power of platform business models and

digitalisation. It is particularly interesting to observe how production chains integrate digital technologies into the global manufacturing business of MNCs in order to achieve the combinatorial synergies of Industry 4.0 and platform ecosystems [Das, Dey, 2021; Veile et al., 2022]. For instance, there has been a shift in the focus of value creation through industrial digital twins from internal use by individual enterprises to ecosystem-level use (Rantala et al., 2023). The implementation of Industry 4.0 concepts is typically based on core technologies that integrate diverse hardware and software to streamline operations within and beyond the company. However, in recent years, there has been a growing recognition that Industry 4.0 technologies can collectively function as platforms, forming the bedrock of technology integration on the path of digital transformation [Benitez et al., 2023].

However, the question of what the mechanisms of partnership (bilateral) and ecosystem (multilateral) interaction should be here is more complex than in the situation of just B2C platforms, which are widely known and more intuitively understood by the example of such companies as *Amazon*, *Alibaba*, *Wildberries* and *Ozon*. It is evident that Russian and international B2C platforms offer Russian industrial companies in the FMCG sector substantial opportunities to boost revenue. It is important to note that the output structure of Russian industrial companies is dominated by products of low or intermediate (medium) processing, which are not intended for final consumers. Consequently, the opportunities presented by foreign e-commerce platforms in the B2C segment are relevant for a relatively smaller share of Russian businesses than would be the case for Italian industrial companies and conglomerates. It is nevertheless worthwhile to consider the potential, constraints and strategies for exporting Russian industrial FMCG companies (including those in the fast-moving consumer goods or high-frequency purchase categories, as well as everyday goods) via Russian and foreign B2C platforms.

1. The prospects and problems of FMCG sector exports through B2C platforms

In the context of sanctions and restrictions, the potential for international expansion of leading Russian B2C platforms (*Wildberries*, *Ozon*, *Yandex* and *Sbermarket*) has been significantly constrained. Following the expansion of Russian platform businesses into Eastern Europe at the end of 2021 (Poland¹, the Czech Republic and Hungary), Belarus represents the only remaining potential target for Russian platforms in the west. This is demonstrated by the active promotion of *Ozon* and *Wildberries*² in this country [Kalenik, 2023]. However, the 'turn to the East' for Russian

¹ Matveev D. Poland introduced sanctions against Wildberries and Tatyana Bakalchuk. VC.ru. 2022. February 26. <https://vc.ru/trade/410699-polsha-vvela-sankcii-protiv-wildberries-i-tatyany-bakalchuk>.

² Kalenik D. Ozon will launch an installment plan for Belarusians and increase the number of order delivery points by 3 times. MYFIN.by. 2023. September 25. <https://myfin.by/stati/view/ozon-zapustit-rassrocku-dla-belorusov-i-v-3-raza-uvelicit-kolichestvo-punktov-vydaci-zakazov>.

Internet economy giants, unlike in some other industries, does not offer any realistic prospects or alternatives. This is because Chinese platforms (especially *Alibaba*, *JD*, *Vipshop*, *Tenscent*) are too strong and dominant not only the Chinese market, but also attract complementors from Central Asia with their 'economic gravity' (in the words of P. Krugman). In the current business environment, it would be more beneficial for Russian industrial companies in the FMCG sector to expand their presence on Chinese digital platforms. This has its own rationale in the evolving geo-economic landscape, but it also presents a set of challenges and strategic constraints. There are four main areas of concern that are interrelated.

The first issue facing Russian FMCG industrial companies is their reliance on a single country's digital platforms. This also has implications for the long-term stability and compatibility of Russian-Chinese relations. It is of greater importance to consider China's approach to regulating digital platforms, including online commerce. Over the past two decades, the PRC has developed a significant platform economy. However, since the beginning of 2021, the Chinese government has implemented a series of new measures, commonly referred to as 'strict regulations', with the aim of addressing issues with 'misbehaving' platforms and enhancing market efficiency. The policy has had a negative impact on the short-term dynamics of the platform economy, including employee layoffs, reduced investment, and a sharp decline in the market value of e-commerce companies [Huang, 2022]. This case study is of significant interest in considering the many aspects of the digital economy, including the response of a strong state like China to the evolution of platform companies from providers of various online services into the core infrastructure of the economy and society. In certain cases, these companies have posed a potential threat to the government's core objectives and priorities [McKnight et al., 2023]. The tumultuous events surrounding digital platforms in China in 2021-2023 have shown that the Chinese government can intervene significantly in the online commerce sector, including for reasons of maintaining the highest possible level of competition among vendors and equal access to all major platforms for all vendors (no exclusive terms and contracts). From a public interest perspective, this regulatory approach is understandable and justified. Initially, international investors in China's leading platforms reacted strongly to the government's intervention, but even this stakeholder group has since become more accepting. However, the share of the stock market represented by "new economy" companies at the end of 2023 has not yet recovered from the significant regulatory changes.

It is also important to consider the role of Russian players in China's digital economy from a strategic perspective, including in the context of the US-China

experience with digital regulatory relations. In the early stages of its development, China's thriving platform economy was relatively open, competitive and market-oriented, benefiting from US capital and the entry of US companies. Since 2009, both countries have gradually restricted access to each other's domestic markets for information services. In both cases, the main official justification has been national security rather than trade concerns. Drawing on international political economy theory, some researchers have proposed the concept of digital neo-mercantilism to describe the model of interaction between the US and China [Mueller, Farhat, 2022]. Digital neo-mercantilism is a concept that combines the power and security of the nation-state with the goal of economic development in the digital economy. In the context of domestic political discourse, politicians often emphasise the importance of information flows and digital technologies for the security and power of the state. As a result, states implement a range of industrial policies, data localisation initiatives, trade protectionism, and even exclude foreign companies from certain segments of the digital economy. Both the United States and China are pursuing such policies.

In the natural and Chinese government-induced processes of intensifying competition in the Chinese e-commerce market, it is necessary to understand the place of Russian suppliers in terms of the prospects of ensuring sufficiently high profitability. The 'ecological niche' for many Russian industrial companies may prove to be a competitive 'red ocean', where companies will seek to reduce costs, compete on price and imitate each other's products. It is possible that within certain industries, such as confectionery, the products of *Krasny Oktyabr* ('Red October') or *Belevskaya Pastila* may be able to survive due to the authenticity of the product or, to some extent, the protection of the geographical origin of certain items in the product nomenclature, as well as the stability of quality and the popularity of the brand. However, such cases may prove to be exceptions to the general rule.

The second issue with the use of Chinese platforms is that they provide a carrot-and-stick incentive for all vendors (including Russian ones) to operate at the deepest possible discounts in order to continually expand the ecosystem. This model has two long-term and sustainable beneficiaries: the consumer and the platform itself. It is essential to dispel illusions and grasp the realities of how platforms view their vendors. Vendors are, metaphorically speaking, fuel for growth; consumables whose business margins the platform is, at best, indifferent about. If they are interested in margins, it is only out of concern for the loss of sales volumes for the platform itself that have not been built up through deeper discounts.

In fact, there is no great specificity of Chinese platforms in this regard (it would be wrong to ascribe to

them a particular ruthlessness towards vendors) – similar manifestations take place in Russia as well. Both Ozon and, in particular, Wildberries regularly urge vendors to support promotions with the deepest possible discounts during the promotional and sales periods, including the threat that their products will not be listed in customers' search queries during the promotional period if the level of discount on the products relative to the average price over the last few months does not reach a certain set level, such as 35%. This has a significant impact on the profitability of vendors on the platforms. They must decide whether to maintain higher prices for some products for a month or two before the sale, allowing them to offer deeper discounts, or to accept temporary "delisting" from the platform as a lesser evil, or still to accept the fact that they will have to work for a week or two with increased sales and a small negative profitability in the name of a "bright future" (and most likely not their own future, but that of the platform).

The third challenge for Russian FMCG industrial companies looking to enter the Chinese market is that they will have to navigate the Chinese business landscape, where Chinese entrepreneurs are known for their global expertise in imitation, product adaptation, rapid implementation, and maximising production scale and efficiency in the so-called unit economy.

The fourth challenge is the influx of complementors and vendors from third countries entering China's online commerce ecosystems. Based on current trends, it is reasonable to assume that this will include Kazakh, Kyrgyz, and Uzbek industrial companies, which may prove to be more competitive (in terms of product mix quality, production costs and logistics chains) and more successful in attracting Chinese investment, particularly in the food industry. Following meetings between representatives of the Kazakhstani government, Kazakhstani businesses and leading Chinese platforms (in particular, JD), there has been a notable increase in the presence of Kazakhstani industrial enterprises on Chinese platforms, with a wide range of food products now available, including sunflower and rapeseed oil, confectionery, alcoholic and non-alcoholic beverages and snacks³.

2. Mechanisms of international collaboration in the sharing of industrial assets based on B2B platform

There is an increasing tendency among sectors and industries to share equipment and production facilities. It is also worth noting that China is implementing the 'Made in China 2025' programme as part of its national innovation and industrial policy. 'Made in China 2025' is China's version of Industry 4.0. The goal is to enhance the country's manufacturing capabilities and establish

over two dozen shared manufacturing platforms with robust innovation capabilities and significant influence in industries projected to become pivotal drivers of quality growth by 2025 [Wang et al., 2020]. The sharing of production capabilities, including equipment, robots, tools, intellectual resources, logistics and warehousing, will be the primary focus.

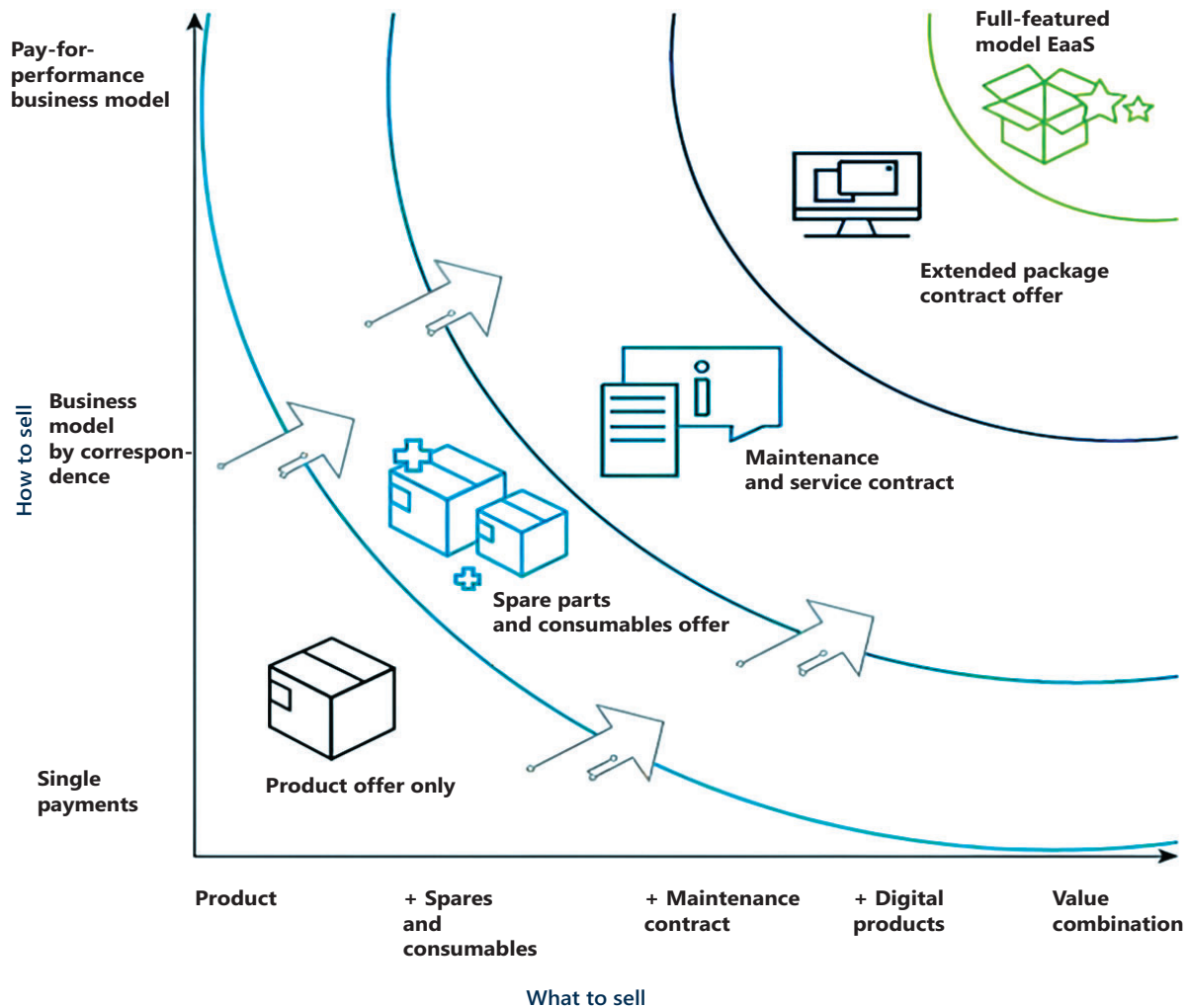
In its most general interpretation, this model is referred to as Equipment-as-a-Service (EaaS), with the focus being on the service and sharing components. It can be viewed as part of the broader manufacturing servitisation trend, which has been accelerated by the advent of digital technologies (Paschou et al., 2020). Industrial managers must consider a range of internal and external factors to ensure strategic, environmental and organisational alignment with the new model [Feng et al., 2021]. The general evolution of this kind of system and the expanded definition of 'hardware as a service' based on combining aspects of the expansion of servitisation and the deployment of platform and ecosystem business models are illustrated in Fig. 1.

It is widely acknowledged within the industrial goods sector that a significant portion of profits is no longer derived from the sale of new equipment. Indeed, aftermarket service offerings that are an organic extension of the core product, such as spare parts or technical support, have emerged as the primary source of profit. In light of the growing prevalence of lower margins on new equipment, an increasing number of OEMs have identified EaaS models as a reliable source of stable revenue streams with high profit margins. Furthermore, there is a clear trend among buyers to shift some of their product usage or capacity into a sharing format. This is driven by fluctuations in demand from their end-users (or other high-end process customers), which are often seasonal or opportunistic in nature. Consequently, customers are opting to purchase fewer machines, typically three or four instead of five, while utilising the remaining one or two as required.

The concept of 'equipment as a service' (EaaS) is already well established among industrial equipment manufacturers. The transition from one-time sales of capital goods (CapEx) to recurring revenue streams based on equipment utilisation or performance (OpEx) has been a standard practice in certain industries for over a decade. The key benefit of this solution is that it enables industrial companies to transition from a high CapEx procurement model to multi-year service agreements with integrated operating cost management. The specific model will be determined based on the customer's requirements. The customer may pay on a per-hour, per-unit, or overall equipment efficiency basis. One prominent example is the Rolls-Royce model, which has been widely publicised and has revolutionised the company's approach to selling

³ Another Chinese marketplace has opened for Kazakh goods. Kazakh entrepreneurs will sell their products on one of China's largest online platforms. Forbes Kazakhstan. 2023. April 17. https://forbes.kz/economy/business/kitayskiy_marketpleys_jdcom_stanet_dostupnyim_dlya_kazahstanskih_tovarov/.

Fig. 1. An expanded definition of 'Equipment as a Service' based on combining aspects of expanding servitisation and deploying platform and ecosystem business models



Source: Equipment-as-a-Service: From capex to opex – New business models for the machinery industry. Deloitte. 2021. https://www2.deloitte.com/content/dam/Deloitte/de/Documents/energy-resources/Deloitte_Equipment-as-a-Service.pdf.

turbines. The capacity per hour pricing model is based on a cost-per-use basis, with customers only charged for the actual hours of use⁴. There is an increasing awareness among businesses that they are not only original equipment manufacturers (OEMs), but also providers of cyber-physical equipment as a service (CPE-aaS) [Sanchez et al., 2022].

The emphasis on long-term equipment maintenance is critical to the evolution of industrial equipment, as it facilitates the identification of common interests between OEMs and customers, provides a stable revenue stream, and enables OEMs to cultivate a more reliable relationship with customers through real-time data analysis. The ability for multiple industrial customers to share homogeneous

production equipment is particularly important in a rapidly changing market environment and technological landscape. The introduction of complex, innovative equipment is often cost prohibitive for companies, especially small and medium-sized enterprises. Access to expensive machines allows industrial companies to test them and understand their capabilities in the context of their specific tasks. This in turn makes the adoption of new technologies more informed, timely and inclusive in terms of building the capabilities and competencies of enterprises [Kimita et al., 2022].

A particularly noteworthy aspect concerns the allocation of access costs to a cohort of tenants. Emerging practice shows that the technologies of the

⁴ Nor Lines and Rolls-Royce sign landmark Power-by-the-hour service agreement. Rolls-Royce Press Release. 2017. 24 May. <https://www.rolls-royce.com/media/press-releases/2017/24-05-2017-nor-lines-and-rr-sign-landmark-power-by-the-hour-service-agreement.aspx>.

Fourth Industrial Revolution make it possible to allocate costs not only according to the duration of access, but also according to the amount of capacity used, or in a combined way where this more accurately reflects the nature of consumption and recovery of industrial assets, based on the analysis of the total (full) cost of ownership. Equipment as a service is one of the most prominent examples of innovation in proprietary business models in industry. It is an innovative business model that combines both the product and the services required to maintain and operate the equipment into a single offering, with a revenue model based on the actual value received [Rösler, Friedli, 2021]. It is vital to gain a deeper understanding of the rationale behind the shift towards sharing-based business models among industrial companies [Stojkovski et al., 2021]. It is essential to emphasise the interconnection between diverse technological domains and the selection of tailored business models by industrial enterprises [Trachuk et al., 2018]. The success of an industrial enterprise is contingent upon the degree of complementarity between a set of digital technologies and a business model. Inconsistencies between these two elements will impact the sustainability and performance of individual business processes and the overall strategy.

At present, the engineering centres in the Russian Federation, both general and specialised in additive technologies, provide technically sound, though limited, opportunities to study and test various technical devices in terms of commercialisation potential and cost-effectiveness. Many enterprises require a more comprehensive offering. It would be advantageous to implement comprehensive digital platforms based on engineering centres, offering equipment rental and leasing, technical support, and the short- and medium-term engagement of rare and highly qualified specialists. This will provide a valuable opportunity to test technologies in real-world business conditions without the need to invest in expensive equipment. In particular, this may facilitate the more effective inclusion of Russian industrial enterprises in international platforms and ecosystems.

Ensuring effective shearing of industrial assets on an international scale presents an even greater challenge. When exploring potential solutions for international industrial asset shearing, Russian industrial companies must consider a number of additional challenges, including the configuration of usage-based business models, currency revaluation of both industrial asset value and industrial subscription payments (industrial subscription), as well as the use of digital financial assets as a means of payment, credit and investment instruments.

3. Proposals on the determinants of the choice of strategies for entering foreign markets

The following list outlines the key factors influencing the choice of strategies for entering foreign markets by Russian industrial enterprises. It is based on the mechanisms of ecosystem interaction and takes into account the current conditions of the platform economy. In this environment, value creation is the result of a new combination of information, physical products and services, a new configuration of transactions and a reconfiguration of resources, capabilities and relationships between suppliers, partners and buyers. The twelve determinants outlined below cover the key aspects of value creation in international production collaboration in a platform configuration:

- the potential for overall platform efficiency based on the reduction of transaction costs in the preparation and execution of export-import transactions of Russian industrial enterprises;
- the potential for complementarity in terms of interdependence with other complementors and counterparts of the platform (both in terms of vertical technological processes and horizontal and unrelated technological interaction);
- the productivity and balance of interests of participants in platforms and ecosystems in terms of the mechanisms and structure of governance and coordination of complementors;
- the potential of international industrial asset shearing for Russian industrial enterprises;
- the potential to improve the operational efficiency of a Russian industrial company, including the possibility of optimising business processes and lead times;
- the potential to increase supply chain transparency;
- the potential to increase the production and logistics flexibility of Russian industrial enterprises;
- opportunities for joint and cross-distribution within inter-enterprise ecosystems of production orders and contracts;
- opportunities to expand product offerings, taking into account interactions with other platform complementors;
- opportunities to 'lock-in' customers;
- opportunities to enhance the innovative nature of activities, including within the context of developing a system of open innovation within the ecosystem of sponsors, complementors, partners and contributors to the platform;
- opportunities to manage the profitability of Russian industrial enterprises in the context of their interdependence with the platform and other complementors of the platform.

It is debatable whether it is appropriate to introduce the possibility of developing new business models as a factor within the proposed list of factors influencing the formation of strategies for entering foreign markets by Russian industrial enterprises based on platform interaction mechanisms. It is crucial to refrain from conflating two discrete areas of focus when examining the involvement of companies, including industrial enterprises, in platforms: strategy and business models. Although there is a clear relationship between business strategies and business models, there are also notable differences in their methodological approaches. It is evident that internationalisation as a business strategy and participation in platforms frequently result in a modification of the company's business model. In some instances, this may even entail a radical transformation or even the creation of an entirely new business model. However, these kinds of developments are often unplanned and derivative, emerging from the evolution of a company's strategy as it becomes integrated into a platform context, including an international one.

Conclusion

In conclusion, a significant challenge in determining the parameters and priorities of platform interaction between industrial companies in the B2B segment (including within the framework of industrial asset sharing models) is the fact that, at both the national and international levels, this kind of interaction is still in its infancy in many sectors. Methodological developments in this area are of particular relevance to Russian industrial enterprises at the present time, as it is essential to identify the preliminary contours of productive interaction in digital platforms. As an increasing number of success stories emerge of Russian industrial companies entering international platforms and as the platforms themselves evolve, it will become possible to discuss in greater depth how Russian industrial companies are selecting their strategies and how these choices can be evaluated. Nevertheless, even at this nascent stage of international production platform development, enhanced awareness of the factors influencing enterprise strategy and productivity will enable platform complementors and the platforms themselves to identify common ground more effectively and facilitate accelerated growth of network effects.

References

- Morozenkova O.V. (2019). Prospects for the development of Russian exports of non-primary non-energy goods in new markets. *Russian Foreign Economic Bulletin*, 9: 44-60. (In Russ.)
- Trachuk A.V., Linder N.V., Tarasov I.V., Nalbandian G.G., Khovalova T.V., Kondratyuk T.V., Popov N.A. (2018). *Transformation of industry in the conditions of the Fourth Industrial Revolution: A monograph*. St. Petersburg, Real'naya ekonomika. (In Russ.)
- Adner R. (2017). Ecosystem as structure: An actionable construct for strategy. *Journal of Management*, 43(1): 39-58.
- Benitez G.B., Ghezzi A., Frank A.G. (2023). When technologies become Industry 4.0 platforms: Defining the role of digital technologies through a boundary-spanning perspective. *International Journal of Production Economics*, 260: 108858. <https://doi.org/10.1016/j.ijpe.2023.108858>.
- Das A., Dey S. (2021). Global manufacturing value networks: assessing the critical roles of platform ecosystems and Industry 4.0. *Journal of Manufacturing Technology Management*, 32(6): 1290-1311.
- Engert M., Evers J., Hein A. (2022). The engagement of complementors and the role of platform boundary resources in e-Commerce platform ecosystems. *Information Systems Frontiers*, 24: 2007-2025. <https://doi.org/10.1007/s10796-021-10236-3>.
- Feng C. Jiang L., Ma Ruize., Bai C. (2021). Servitization strategy, manufacturing organizations and firm performance: A theoretical framework. *Journal of Business & Industrial Marketing*, 36(10): 1909-1928.
- Huang Y. (2022). 'Strong regulations' of China's platform economy: a preliminary assessment. *China Economic Journal*, 15(2): 125-138. <https://doi.org/10.1080/17538963.2022.2067687>.

- Jovanovic M., Kostić N., Sebastian I.M., Sedej T. (2022). Managing a blockchain-based platform ecosystem for industry-wide adoption: The case of TradeLens. *Technological Forecasting and Social Change*, 184: 121981. <https://doi.org/10.1016/j.techfore.2022.121981>.
- Kimita K., McAloone T.C., Ogata K., Pigosso D.C.A. (2022). Servitization maturity model: Developing distinctive capabilities for successful servitization in manufacturing companies. *Journal of Manufacturing Technology Management*, 33(9): 61-87.
- Kokkonen K., Hannola L., Rantala T., Ukko J., Saunila M., Rantala T. (2023). Preconditions and benefits of digital twin-based business ecosystems in manufacturing. *International Journal of Computer Integrated Manufacturing*, 36(5): 789-806.
- Loonam J., O'Regan N. (2022). Global value chains and digital platforms: Implications for strategy. *Strategic Change*, 31(1): 161-177. <https://doi.org/10.1002/jsc.2485>.
- McKnight S., Kenney M., Breznitz D. (2023). Regulating the platform giants: Building and governing China's online economy. *Policy & Internet*, 15: 243-265. <https://doi.org/10.1002/poi3.336>.
- Mishra S., Singh S.P. (2019). An environmentally sustainable manufacturing network model under an international ecosystem. *Clean Technologies and Environmental Policy*, 21: 1237-1257.
- Mueller M.L., Farhat K. (2022). Regulation of platform market access by the United States and China: Neo-mercantilism in digital services. *Policy & Internet*, 14: 348-367. <https://doi.org/10.1002/poi3.305>.
- Naudé W. (2022). Late industrialisation and global value chains under platform capitalism. *Journal of Industrial and Business Economics*, 50(1): 91-119.
- Paschou T., Rapaccinib M., Adrodegaria F., Saccania N. (2020). Digital servitization in manufacturing: A systematic literature review and research agenda. *Industrial Marketing Management*, 89: 278-292.
- Rantala T., Ukko J., Nasiri M., Saunila M. (2023). Shifting focus of value creation through industrial digital twins - From internal application to ecosystem-level utilization. *Technovation*, 25: 102795. <https://doi.org/10.1016/j.technovation.2023.102795>.
- Rösler J., Friedli T. (2021). A capability model for equipment-as-a-service adoption in manufacturing companies. In: *Smart services summit: Digital as an enabler for smart service business development*. Cham, Springer International Publishing, 59-71.
- Sanchez G., Bo G., Cardinali F., Tonelli F. (2022). Cyber-physical equipment as a service. In: *International conference on system-integrated intelligence*. Cham, Springer International Publishing, 318-327.
- Stojkovski I., Achleitner A.K., Lange T. (2021). Equipment as a service: The transition towards usage-based business models. *SSRN*, 3763004.
- Su Z., Wei J., Liu Y. (2023). Digital industrial platform development: A peripheral actor's perspective. *Technological Forecasting and Social Change*, 194: 122683. <https://doi.org/10.1016/j.techfore.2023.122683>.
- Suuronen S., Ukko J., Eskola R., Semken S., Rantanen H. (2022). A systematic literature review for digital business ecosystems in the manufacturing industry: Prerequisites, challenges, and benefits. *CIRP Journal of Manufacturing Science and Technology*, 37: 414-426. <https://doi.org/10.1016/j.cirpj.2022.02.016>.
- Tolio T.A.M., Monostori L., Váncza J., Sauer O. (2023). Platform-based manufacturing. *CIRP Annals*, 72(2): 697-723. <https://doi.org/10.1016/j.cirp.2023.04.091>.
- Uzunca B., Sharapov D., Tee R. (2022). Governance rigidity, industry evolution, and value capture in platform ecosystems. *Research Policy*, 51(7): 104560. <https://doi.org/10.1016/j.respol.2022.104560>.
- Veile J., Schmidt M.-C., Voigt K.-I. (2022). Toward a new era of cooperation: How industrial digital platforms transform business models in Industry 4.0. *Journal of Business Research*, 143: 387-405. <https://doi.org/10.1016/j.jbusres.2021.11.062>.
- Wang J., Wu H., Chen Y. (2020). Made in China 2025 and manufacturing strategy decisions with reverse QFD. *International Journal of Production Economics*, 224: 107539. <https://doi.org/10.1016/j.ijpe.2019.107539>.

About the author

Sergey V. Ilkevich

Candidate of economic sciences, associate professor at the Chair of Strategic and Innovative Development, leading researcher at the Institute for Management Studies and Consulting, Financial University under the Government of the Russian Federation (Moscow, Russia). ORCID: 0000-0002-8187-8290; Scopus ID: 56028209600; SPIN: 6655-7300.

Research interests: innovations and business models, international business, digital transformation of industries, sharing economy, stock market, portfolio investment, experience economy, internationalisation of education.

SVIlkevich@fa.ru

作者信息

Sergey V. Ilkevich

经济学副博士，战略与创新发展系副教授，管理研究与咨询研究所主要研究员，俄罗斯联邦政府财政金融大学（俄罗斯·莫斯科）。ORCID: 0000-0002-8187-8290; Scopus ID: 56028209600; SPIN: 6655-7300.

科研兴趣领域：创新与商业模式、国际业务、行业数字化转型、共享经济、股票市场、投资组合、体验经济、教育国际化。

SVIlkevich@fa.ru

The article was submitted on 12.05.2024; revised on 04.06.2024 and accepted for publication on 10.06.2024. The author read and approved the final version of the manuscript.

文章于 12.05.2024 提交给编辑。文章于 04.06.2024 已审稿，之后于 10.06.2024 接受发表。作者已经阅读并批准了手稿的最终版本。