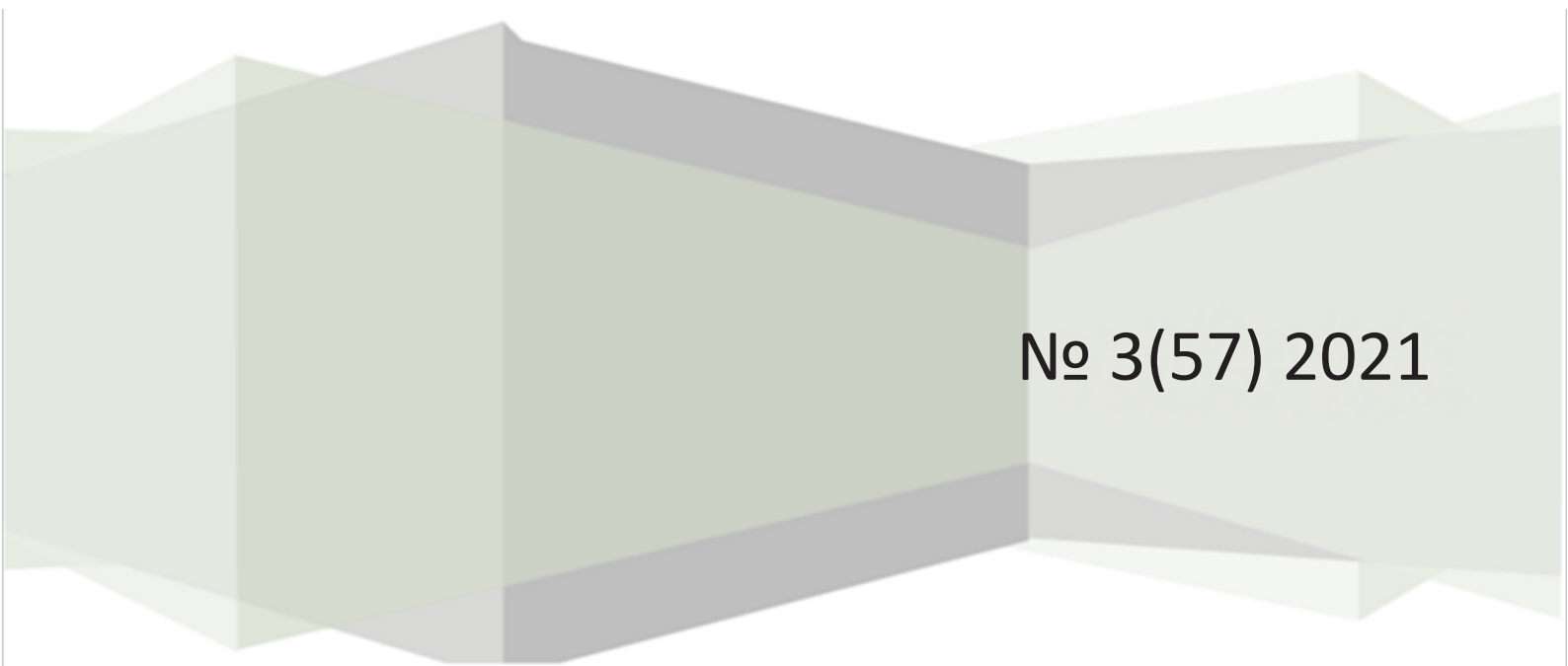


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Application and Implementation of the PCI DSS Standard for Data Protection in the Field of Payment Cards

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Key words and phrases: map; security; structure; information; security.

Abstract. The purpose of the study is to determine that payment systems have identified a number of categories of these organizations so that they can determine how to confirm their compliance with them. The research task is to confirm that their compliance depends on the level of the organization. The research hypothesis is that it accounts for 1 million payment transactions per year for trade and service enterprises. The paper uses general scientific research methods. The findings are as follows: according to the Visa and MasterCard classification, systems that process or transmit data on more than 6 million transactions per year belong to the first level (Level 1) and are required to undergo an annual audit. For Tier 1 and Tier 2 organizations, one must pass an external QSA audit through an independent auditor who examines how you meet the requirements of the PCI DSS standard.

According to the proposed methodology, the implementation of the PCI DSS standard for information systems operating in a virtual infrastructure is as follows. A client placing his infrastructure in a virtual environment of a cloud provider delegates the lower levels to this provider. Since the requirements of the standard remain the same, in this case the question arises - how to divide responsibility between the client and the cloud provider. Since the payment card data circulates at all levels of the network, the protection of applications and operating systems is not sufficient. If the client has problems at the network or virtualization level, the protection will be useless and the attacker will "compromise" the information system at those levels. Therefore, there are two options for how to act for a client hosted in the cloud [1].

1. If the provider is not PCI DSS certified, it is necessary to go through the compliance with the provider.

2. If the provider is PCI DSS certified, it is necessary to sign a document between the client and the provider "Matrix for the allocation of responsibility for fulfilling PCI DSS requirements" (usually an annex to the contract) [3]. In this document, the provider must define the liabilities of both parties, for example, for which infrastructure levels the provider fulfills certain requirements, and for which levels the client fulfills the requirements. This ensures transparency

in understanding the responsibilities of both the client and the provider.

The main PCI DSS certification services include two stages.

1. Inspection of the client's information system and development of recommendations for adjustments. During the inspection of the information system, the analysis of the initial information is carried out, the current level of compliance is assessed, and the initial scope of the PCI DSS standard is defined. Certification can be carried out in general both for companies and for a dedicated area in which the data of payment cardholders is processed. It is necessary to understand that the smaller the scope of certification, the more transparent, more understandable and more controllable it is [4–6]. Also, an attacker, as a rule, has fewer opportunities to carry out any attacks. To narrow the scope of certification, you can use network segmentation and network traffic control. Also, the developers of the standard do not recommend storing payment card data and not processing them in systems where there is no need.

2. Implementation of the requirements of the standard. At this stage, the requirements of the standard are implemented, that is, all the activities specified in the plan are being carried out. They include [2]:

- development of policies, standards and procedures required to comply with the PCI DSS standard;
- work on the design of the information security system;
- work on the implementation of the information security system.

It is necessary to take into account that for the PCI DSS standard it may be necessary to implement such information protection means as a firewall, systems for collecting and analyzing information security events, an integrity control system and a two-factor authentication system. Depending on the level of the company, the PCI DSS standard defines four certification levels (Table 1).

Here are some examples. In 2020, a client from the financial sector (a bank) approached, who had two urgent problems:

- 1) preparing information infrastructure for compliance with PCI DSS payment systems security standards;
- 2) increasing the level of security of the company as a whole.

From 2019 the client began experiencing difficulties in the operation of their infrastructure systems; there were periodic failures in work, which led to the degradation of its services. The attempts to resolve these issues with the service provider, through which it was connected to the Internet, were unsuccessful. Upon further analysis, it was revealed that these were cyber-attacks on the client's information system, which led to an increase in the load on the hardware capacities which were difficult to cope with. As a result, the client realized that the resources that they possessed at that time – knowledge, competencies, time – were not sufficient to promptly solve the problems that arose before him. Thus, it was a real case in which it was necessary to provide comprehensive network protection.

According to the developed methodology, first of all, a complete survey of the client's infrastructure and analysis of the existing information systems were carried out. This is a very important step so as to further eliminate possible fundamental errors in the architecture of the network and security in general.

Like most clients, the network infrastructure had a simple design, in this case with two external connections to the service provider, and the role of the Firewall was played by a limited router, which described attempts to filter using standard tools, access lists or IP table rules, on which or server platforms. Such blocking was insufficient, because in this case, "parasitic" traffic reached the network infrastructure and could lead to degradation and cause economic harm to

Table 1. Certification levels

level	Description	PCI DSS certification
4	Trade and service enterprises handling fewer than 20,000 e-commerce transactions per year, and all other trade and service enterprises not listed elsewhere handling up to 1 million transactions per year, regardless of the channel	Annually: Security Self-Assessment Questionnaire (SAQ). Quarterly: ASV scan; acquiring bank determines compliance requirements
3	Trade and service enterprises handling 20,000 – 1 million e-commerce transactions per year	Annually: SAQ. Quarterly: ASV scan
2	Trade and service enterprises handling 1-6 million transactions per year, regardless of the channel of their receipt	Annually: SAQ. Quarterly: ASV scan
1	Trade and service enterprises handling more than 6 million transactions per year, regardless of the channel of their receipt	Annually: Audited by an Approved Security Auditor (QSA). Quarterly: ASV Vulnerability Scan

the business.

In this case, having chosen the optimal solution together with the IT director for information security (the position of a letter of recommendation), the client was offered a service from the manufacturer CheckPoint – checkup, which was carried out directly at the client's site. Thanks to the comprehensive survey, it was possible to identify possible problem areas on which it was necessary to focus attention. At the design stage of the information security complex, to solve the client's problem, it was decided to use a corporate-class device of the 2000 series check point, which fully met the customer's requirements. In the course of the design, the infrastructures were segmented to isolate and delineate the client's networks used, such as the control network, the internal network and the Internet, as well as a gateway installation scheme in which the Firewall was installed in the place where it provided maximum protection.

In this case, a space was allocated on the edge of the network in Inline mode. Further, according to the developed methodology, it was decided to start implementing the project. This project was successful, the result of the work performed was that the client provided himself not only with the fulfillment of the international requirements of the PCI DSS payment systems, but also implemented a modern solution to protect against threats in a timely manner, thereby increasing the level of security and ensuring business continuity, ensuring the flexibility and scalability of the infrastructure, reduced the risks of the impact of attacks, which led to a decrease in direct losses from incidents.

References

1. Korauš, A. Consumer approach to bank payment card security and fraud / A. Korauš, J. Dobrovic, A. Kljucnikov, M. Gombár // Journal of Security and Sustainability Issues. – 2016. – No. 6(1). – P. 85–102 [Electronic resource]. – Access mode : [https://doi.org/10.9770/jssi.2016.6.1\(6\)](https://doi.org/10.9770/jssi.2016.6.1(6)).
2. Li, P. A contactless mobile payment method based on security TF card and NFC technology / P. Li, Q. Zhou, Y. Liu, D. Zhao // Advanced Materials Research: 317–319, 1769–1772, 2011 [Electronic resource]. – Access mode : <https://doi.org/10.4028/www.scientific.net/AMR.317-319.1769>.
3. Liu, J. A survey of payment card industry data security standard / J. Liu, Y. Xiao,

H. Chen, S. Ozdemir, S. Dodle, V. Singh // IEEE Communications Surveys and Tutorials. – 2010. – No. 12(3). – P. 287–303 [Electronic resource]. – Access mode : <https://doi.org/10.1109/SURV.2010.031810.00083>.

4. Morse, E.A. PCI DSS: Payment card industry data security standards in context / E.A. Morse, V. Raval // Computer Law and Security Report. – 2008. – No. 24(6). – P. 540–554 [Electronic resource]. – Access mode : <https://doi.org/10.1016/j.clsr.2008.07.001>.

5. Sudžius, V. A gap and damage in the security of payment cards / V. Sudžius, V. Mackevičius // Business: Theory and Practice. – 2006. – No. 7(3). – P. 146–149 [Electronic resource]. – Access mode : <https://doi.org/10.3846/btp.2006.17>.

Особенности применения и внедрения стандарта PCI DSS для защиты информации в области платежных карт

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Ключевые слова и фразы: безопасность; информация; карта; структура.

Аннотация. Цель исследования – показать, что платежные системы выделили ряд категорий организаций, чтобы они могли определить, как подтвердить свое соответствие им. Задача исследования – подтвердить, что их соответствие зависит от уровня организации. В статье использованы общенаучные методы исследования. Выводы таковы: согласно классификации Visa и MasterCard, системы, обрабатывающие или передающие данные о более чем 6 миллионах транзакций в год, относятся к первому уровню (Уровень 1) и должны проходить ежегодный аудит. Для организаций уровня 1 и уровня 2 необходимо пройти внешний аудит QSA через независимого аудитора, который проверяет, насколько компания соответствует требованиям стандарта PCI DSS.

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The Role of Small and Medium-Sized Businesses in Russia and China

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Key words and phrases: China; international entrepreneurship; potential; prospects; Russia; Russian-Chinese cooperation.

Abstract. The paper focuses on the promising areas of international entrepreneurship between Russia and China. The author discusses the existing agreements between Russia and China in order to determine mutually beneficial areas of cooperation. Currently, both countries have to deal with a number of challenges, including different approaches to small and medium-sized businesses, discrepancies in regulatory support, political disagreements etc. This results in preventing both countries from effective development of entrepreneurial relations. The author puts forward some ways of improving the existing economic and political situation in order to enhance the development of joint ventures.

In many countries of the world, small and medium-sized businesses (hereinafter referred to as SMEs) have a decisive influence on the dynamics of development of the entire national economy. The dynamics of SMEs, more than 50 % of which operate in the service sector (the sphere of consumer services for the population) is the main source of new jobs for the economy. The multiplier effects of the development of the SME sector are becoming an important factor in the development of related sectors of the economy [2]. Small and medium-sized businesses play a key role in the development of large business, serving it, supplying the necessary products. Due to the greater adaptability of SMEs to the rapidly changing conditions of the external environment, the ability to effectively influence current risks, this sector is becoming a significant source of innovative development [1]. The development of small and medium-sized businesses makes a positive contribution to ensuring a balance in the market environment; in addition, the quality of the structure of sectoral markets improves due to the provision of a high level of competition. A significant advantage in the development of the SME sector is the formation of an environment for the self-realization of a significant number of citizens, their self-determination, which can reduce the level of social tension in the state.

According to research by international organizations, by 2030 an additional amount of jobs will be needed, amounting to 600 million workers [1]. In such conditions, the importance of the SME sector is also especially great, since this sector is a significant factor in reducing possible economic and political crises in the countries of the world.

In addition to "internal" effects, the role of small and medium-sized businesses in the context

of international integration processes in the economy is also in the development of economic ties between countries. On the other hand, small and medium-sized businesses in relations between countries can become an additional and significant growth point for both mutual trade and the national economy. However, this can only happen if the development program is an investment project. It will also be possible to evaluate the effectiveness of cooperation using the methodology for evaluating an investment project [3].

The change in the geo-economic situation has affected the intensification of cooperation in the field of entrepreneurship between China and Russia. Despite this, due to a number of objective economic and political circumstances, the potential for interaction in the field of small and medium-sized businesses has not been realized. To reduce the negative impact of these negative processes, first of all, we will analyze the criteria that are taken into account in states when attributing an organization to the SME sector.

The analysis of the provisions of Russian legislation makes it possible to divide the existing criteria for classifying economic entities as small and medium into qualitative and quantitative ones. The SME sector in China is regulated by the PRC Law on the Promotion of Small and Medium Business Development. Two indicators are used as criteria here: the number of employees and the company's revenue for the year. Also, as in the Russian practice and the practice of other states, the category of SMEs includes a subgroup of micro-enterprises (included in small enterprises).

As of 2020, the number of SMEs in China exceeded 43 million, with a positive increase from year to year. Since 2016, there has been a slowdown in the growth rate of the number of SMEs.

According to the Federal Customs Service of Russia, the share of exports of SMEs in the total volume of non-resource exports has been increasing in recent years. At the same time, this volume of exports remains insufficient; for example, in Europe, exports of SMEs account for over 50 % of total exports.

The main obstacles and problems in the implementation of export activities of SMEs are generally characteristic of interstate relations between Russia and China. Such obstacles and problems include:

- market constraints (insufficient level of competitiveness, problems of promoting products by SMEs, high exposure to the influence of currency volatility on competitiveness, etc.);
- resource constraints;
- administrative problems;
- organizational problems;
- structural economic problems.

The solution of these problems is becoming an important condition and an independent block in the direction of increasing the efficiency of the functioning of SMEs in Russia and China in the formation of interstate mechanisms for the development of this sector.

Improving the efficiency of the functioning of SMEs in China and Russia should take into account the entire set of conditions, factors and circumstances that affect entrepreneurial activity in this sector. They are:

- differences between countries in the criteria for classifying economic entities as small and medium-sized businesses;
- the established practice of introducing mechanisms to stimulate cooperation between countries in the field of supporting small and medium-sized businesses;
- the current state of small and medium-sized businesses in Russia and China.

Among the areas that would allow unlocking the potential of Russian-Chinese cooperation in the field of small and medium-sized businesses, two groups can be distinguished:

- a) general measures, covering all sectors of the economy;
- b) sectoral measures related to the realization of the potential of individual sectors, spheres and types of economic activity.

General measures include the following:

- 1) creation of unified analytical virtual resources with the provision of information on the structure of the Russian or Chinese market to the relevant small and medium-sized businesses;
- 2) supplementation of the existing government programs with special mechanisms to reveal the potential of individual projects of interstate cooperation [3];
- 3) regional differentiation of support for interstate cooperation, especially from the Russian side;
- 4) improvement of the mechanisms of information exchange between SMEs in Russia and China;
- 5) formation of scientifically based measures to promote the products of SMEs in the Russian and Chinese markets, taking into account the numerous characteristics of the countries;
- 6) elimination of administrative, customs and certification barriers in relations between countries;
- 7) creation of special zones (innovation zones), providing conditions for productive cooperation between Russia and China;
- 8) integration of telecommunication subsystems as a condition for the development of electronic commerce.

The second group of measures (sectoral measures) requires decision-making in the following areas, industries and types of economic activity:

- 1) industry of high technologies and software;
- 2) products of the radio-electronic industry;
- 3) sphere of innovations and venture entrepreneurship;
- 4) development of tourism;
- 5) development of cooperation in the field of supply of organic food by the Russian side to China;
- 6) development of relations in the field of logistics and transport on the basis of the “One Belt – One Road” platform.

Thus, at present, the small and medium-sized business sector in Russia and China has significant unrealized potential. Improving the efficiency of this sector requires the elimination of existing barriers in trade and economic relations between countries, as well as the adoption of a set of measures – both general and sectoral.

References

1. Klimova, N.V. Innovacionnoe predprinimatel'stvo v Kitae / N.V. Klimova, O.S. Glushchenko // *Fundamental'nye issledovaniya*. – 2018. – № 10. – S. 74–78.
2. YAluner, E.V. Strategicheskoe planirovanie razvitiya sfery uslug: teoreticheskie i konceptual'nye polozheniya : monografiya / E.V. YAluner; SPbGUSE. – M., 2006.
3. YAluner, E.V. Ocenka effektivnosti gosudarstvennyh programm / E.V. YAluner, D.G. Gashko // *Global'nyj nauchnyj potencial*. – SPb. : TMBprint. – 2017. – № 9(78). – S. 141–143.

Развитие малого и среднего предпринимательства в России и Китае

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Ключевые слова и фразы: Китай; международное предпринимательство; перспективы; потенциал; российско-китайское сотрудничество; Россия.

Аннотация. В статье рассматриваются перспективные направления международного предпринимательства между Россией и Китаем. Цель работы – изучить существующие договоренности между Россией и Китаем для дальнейшего определения взаимовыгодных направлений международного сотрудничества в сфере предпринимательства. Задачи исследования сводятся к поиску ответов на такие вопросы, как решение проблемы унификации критериев определения малого и среднего предпринимательства, устранение несоответствий нормативной базы, сглаживание политических разногласий и т.д. Предлагаются пути улучшения существующей экономической и политической ситуации с целью повышения эффективности создания совместных российско-китайских предприятий.

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Pricing in the Contemporary Art Market

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Key words and phrases: art sales; contemporary art; pricing; transformation of the contemporary art market.

Abstract. The article discusses the features of pricing in the market of contemporary art. The purpose of this study is to identify the main trends in pricing in the art market and the specifics of changes in the valuation of art objects. The hypothesis of the study is based on the assumption that there will be a transformation of consumer behavior in the art market and sellers of art objects will respond to this by using new sales technologies and interactions with buyers. The main research methods in the article are the comparative research method and the analysis of scientific literature. Based on the results of the study, the authors concluded that there is a revision of approaches to pricing in the art market, caused by changes in the cultural environment, fashion and shopping motives.

Pricing in contemporary art is a complex and opaque process. Nevertheless, there are the main objective factors that affect the value of a work of art: the generally accepted class of the master, his belonging to a certain era; the personal history of the author (the identity and level of innovation and the work itself); the presence of the master's works in leading museum collections and galleries; critical reviews, participation in international projects; the frequency of personal exhibitions, entry into authoritative catalogs; the age of the work; technique; quality of work; size of the work; provenance (the presence of a signature, dating, etc.) and subjective factors: personal preferences of buyers (including the so-called "premium for irrationality"), the desire to possess a certain specific work. The formation of prices for works of art is also influenced by the following events: auction sales – one sale can not be the final price. The formed prices for certain works of art (the same in the date of creation, quality, size, etc.) can be said in the presence of 7–10 sales of similar works. When determining the cost of the remaining works of the artist, you can make adjustments depending on the quality of the works under consideration. Gallery sales-the correction of the value of works of art takes place at international art fairs with a large number of visitors and participants. The prices displayed by galleries allow you to estimate the current value of specific artists. Setting the price depends on the type of organization that sells the work. It is believed that the cost of the painting increases with each personal exhibition or inclusion in the catalog by 10–20 % [1]. Galleries and auction houses do use a different approach to price formation. If the former are engaged in the art trade, the latter sell goods.

The worldwide success of Kusama (as well as Takashi Murakami or Ai Weiwei) shows that the focus has shifted from Western art, which has always been the focus of attention since the

Renaissance, to Asian art. Western galleries such as Gagosian Gallery, Pace Gallery, Zwirner Gallery, Perrotin Gallery, Hauser & Wirth Gallery are keeping up with this process and opening their branches in the East, becoming global players. Although they are reluctant to talk about the profitability of the Eastern branches, the first results of research on the global market for contemporary art show that the deals of such galleries are comparable to the funding received by the richest American universities. Similarly, museums such as the Louvre in France or the Guggenheim Museum in the United States open their branches outside of Western European countries, for example, in the United Arab Emirates. The boundaries between galleries, auction houses, and museums are increasingly blurred.

The most difficult is the pricing in the market of contemporary art. There is a general price pyramid of the contemporary art market. It is based on the generally accepted prices for final works in art schools. As the artist ascends the ladder of recognition by critics and the market, the prices of his works rise. This is the natural course of things, but the status of the artist is often artificially raised [3, p. 305]. To do this, there are a number of ways, in particular, overpricing by dealers, the actions of leading collectors. For example, Charles Saatchi repeatedly tried to form a market for the sales of artists he collected. Buying up the entire exhibition or the entire work of the author, he then promoted it at his exhibitions and in publications. Thus, he repeatedly increased the value of his collection due to the simple fact that he controlled the entire body of works by a number of authors. When there is almost no supply on the market, it is easy to sell several works at the highest possible price.

The criteria for a successful artist for contemporary art is primarily innovation, usually appearing in the form of provocation. A well-known curator (gallery or art dealer) must also always be present. In his professional activity, the artist must constantly participate in fairs and biennales, as well as often give interviews in the press.

The formation of prices for works of modern art should be considered not only from an exclusively economic point of view, because we are talking about prices for objects that have aesthetic value [4]. Roughly speaking, the price has a certain meaning. All markets (including the contemporary art market) work in the same way: they are driven by prices that cannot exist separately from the cultural reality. Prices cannot exist as independent and self-sufficient structures. On the contrary, they exist within a complex cultural system.

The economic and cultural sociology of the contemporary art market must take into account the growing influence on price formation from not only “star” but also invisible intermediaries, that is, not only obvious players such as gallery owners, art dealers and well-known curators (and their pricing systems), but also those who can be called “dark” or invisible intermediaries: assistants, workshops with which artists work, technical specialists, consultants, suppliers and logistics companies [2, p. 169].

To understand the process of art price formation, it is very important to draw a clear line between price and pricing-concepts that researchers too often confuse with each other. Prices are set based on technical parameters, such as format, size, and other characteristics (for example, price and size, or price and media type are interrelated). Accordingly, prices cannot be set spontaneously. A larger work will cost more than a small work, and a painting will cost more than a drawing, and so on. However, the price of the product depends not only on its technical characteristics. But to understand such non-technical aspects, it is necessary to analyze pricing, which is an art in itself. Art dealers rely on different pricing schemes (pricing scripts), which “work as cognitive guides to help make a particular decision” to set the price of a work of art. The process of setting a price, being a social skill, depends on different indicators and trajectories [5, p. 154]. To justify their prices (and the prices of competitors), merchants write them into a certain discourse, which has moral connotations that help the merchant in making

decisions and justify a particular choice. From this point of view, the art market is not much different from other market segments, which also rely on certain tariff schemes determined by different cultural aspects.

References

1. Gisich, M. Sistema ocenki: kak formiruetsya cena na proizvedeniya iskusstva / M. Gisich [Elektronnyj resurs]. – Rezhim dostupa : <https://design-mate.ru/read/an-experience/price-for-works-of-art>.
2. Semenova, YU.E. Ispol'zovanie omni-kanalov v sovremennoj roznichnoj trgovle / YU.E. Semenova, O.V. Voronkova, E.N. Ostrovskaya, A.YU. Panova // Nauka i biznes: puti razvitiya. – M. : TMBprint. – 2019. – № 10(100). – S. 169–172.
3. Holodenina, K.G. Osobennosti sistemy cenoobrazovaniya na rynke proizvedenij iskusstv / K.G. Holodenina; otv. red. A.A. Gorohov // Instituty i mekhanizmy innovacionnogo razvitiya: mirovoj opyt i rossijskaya praktika : sbornik nauchnyh statej 7-j Mezhdunarodnoj nauchno-prakticheskoy konferencii : v 3-h tomah, 2017. – S. 305–307.
4. Desfontaines, L. Organizational Culture of Trade Enterprises in the Context of Modern Demographic Challenges and Applying Information Technologies / L. Desfontaines, E. Korchagina, A. Varnaev, Yu. Semenova // IOP Conference Series: Materials Science and Engineering, 2018.
5. Semenova, Yu.E. Transformation Of Sales Methods In Modern Conditions / Yu.E. Semenova, E.N. Ostrovskaya, S.V. Gribanovskaya // Global Scientific Potential. – SPb. : TMBprint. – 2020. – № 9(114). – P. 154–156.

Ценообразование на рынке современного искусства

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Ключевые слова и фразы: продажа произведений искусства; современное искусство; трансформация рынка современного искусства; ценообразование.

Аннотация. В статье рассматриваются особенности ценообразования на рынке современного искусства. Цель данного исследования – выявить основные тренды в ценообразовании на рынке предметов искусства и специфику изменений в оценке стоимости арт-объектов. Гипотеза исследования заключается в предположении о том, что будет происходить трансформация потребительского поведения на рынке предметов искусства и продавцы арт-объектов будут реагировать на это, используя новые технологии продаж и взаимодействия с покупателями. Основные методы исследования в статье – сравнительный метод исследования и анализ научной литературы. По итогам исследования авторами сделаны выводы о том, что происходит пересмотр подходов к ценообразованию на рынке произведений искусства, вызванный изменениями в культурной среде, моде и мотивах совершения покупок.

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Current State and Problems of the Intellectual Property Market

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Key words and phrases: commercialization of intellectual property; franchise; intellectual property management in business; intellectual property objects; measures of protection of intellectual rights; tax and corporate risks; technology transfer.

Abstract. In order to study the current state and problems of the intellectual property market, an analysis of current trends in this area was carried out. As a result of the study, the following features of the intellectual property market were identified. The commercialization of intellectual property and technology transfer are actively taking place, the principles of franchise organization are being formed, both on the domestic and global markets, and problems in the field of tax and corporate risks are being solved when using intellectual property objects.

Numerous statements about the need for innovative development of the Russian economy have not led to the formation of a full-fledged and competitive intellectual property market. The intellectual property market as an information and legal environment for inventions is necessary because the Russian economy needs to reach a higher technological level.

There are several key areas in the field of intellectual property market formation, where the scientific community, business and government should actively seek cooperation.

The most pressing issues are the commercialization of the results of intellectual activity, which creates strategic advantages for business, provides protection against copying and unfair competition, and provides legal protection. Innovative development of production attracts additional investments, allows you to receive income from the transfer of exclusive intellectual property rights to other market participants, increases the possibility of obtaining credit funds. All these factors increase the value of the business and improve the business reputation. But the business does not always retain intangible assets, and often does not notice the intellectual factors of capital growth. In this regard, it is important to teach businesses that investing in new developments and their further commercialization helps to increase further capitalization.

Such a phenomenon as an innovation voucher can become one of the most effective tools for increasing the demand for innovations and stimulating the commercialization of the results of intellectual activity in the world. Today, the issue of the need to introduce innovative vouchers and prepare a regulatory framework for their application is being actively raised. The introduction of innovative vouchers will allow you to get the necessary services for inventors and work in accredited organizations.

One of the main limitations of the development of the intellectual property market is the lack of financial resources for inventors and authors. It has long been necessary to develop appropriate amendments to the Tax Code of the Russian Federation, which will create conditions for saturating the market with highly qualified personnel who can work on modern equipment, and will allow enterprises, including manufacturers of high-tech equipment, to train personnel to work on it.

It is necessary to adopt in the State Duma a draft law "On Amendments to the Federal Law "On Patent Attorneys". In particular, it is proposed to provide for a separate procedure for the internship of a candidate for patent attorneys and the possibility of establishing a patent attorney's office for a patent attorney registered as an individual entrepreneur.

Today, the existing norms of intellectual property require active study. It is necessary to establish penalties for such phenomena as the attribution of authorship to an invention by other persons, forcing inventors to co-authorship, countering the right to file an application for a patent for an invention, disclosing the essence of the invention without the consent of the author or applicant, and illegal use of the invention.

The measures of administrative punishment proposed for these actions are now disproportionate to the amount of actual damage caused. It is necessary to develop measures for the confiscation of goods containing signs of illegal use of an invention, utility model or industrial design.

Since at the moment there are no legally established criteria for defining exhibitions as "official and officially recognized international exhibitions" in Russia, it is difficult to implement a uniform practice of establishing exhibition priority for a trademark. It is necessary to introduce national regulation of the status of the exhibition, as some European countries do. Russian legislation does not provide for the establishment of exhibition priority for inventions, utility models, and industrial designs, limiting itself only to the possibility of granting "novelty benefits" to inventions, utility models, and industrial designs.

During the pandemic, the number of applications for inventions in 2020 decreased by only one and a half percent. And as the business exits the zone of restrictions, an explosive growth of applications for inventions and utility models began in December 2020. A large proportion of the inventions were related to anti-virus measures. These were mainly patents for protective equipment, medicines, devices, etc. At the same time, the number of Russian trademark applications increased by 15 percent. There is a significant preponderance of publication activity in comparison with patent activity. Despite the growth of applications from inventors, Rospatent has significantly reduced the time for consideration of received applications for finished products, and in other areas of work, the time is also seriously reduced. Rospatent also expresses the opinion that serious changes in the regulatory framework are needed and it is extremely important to introduce tax incentives.

Today, there are dramatic changes in the field of intellectual property due to the huge spread of social networks, means of communication, etc. There are a lot of conflicts, we need a well-developed system of their pre-trial settlement, and this requires certain changes in the legislative framework. The issues of protection and protection of rights to trademarks and other means of individualization have become more relevant than ever.

Intellectual property is being commercialized and technology is being transferred, new challenges are being created in this area, and modern tools and solutions are being offered. Especially popular are the issues of franchise organization, both in the domestic and in the world market. It is necessary to solve acute problems in the field of tax and corporate risks when using intellectual property objects. Special measures are needed to protect intellectual property

rights in the pharmaceutical sector of the economy, the issues of legal protection of computer programs and the disposal of rights to them, and the management of intellectual property in business are still relevant.

References

1. Voronkova, O.V. Encouraging employees to increase the labor intellectualization level as a factor of evolution of the intellectual capital at an enterprise / O.V. Voronkova, P.P. Vetrenko, E.A. Chernysheva, I.Y. Levitina, D.G. Mikheeva // *European Research Studies Journal*. – 2017. – Vol. 20. – No. 4B.
2. Yaluner, E.V. Infrastructure for the support of entrepreneurship in Saint Petersburg and Leningrad oblast: assessments and projections / E.V. Yaluner, I.Yu. Levitina, P.P. Vetrenko, O.V. Voronkova, E.A. Chernysheva // *International Journal of Civil Engineering and Technology*. – 2018. – Vol. 9. – No. 10.

Современное состояние и проблемы рынка интеллектуальной собственности

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Ключевые слова и фразы: коммерциализация интеллектуальной собственности; меры особых интеллектуальных прав; налоговые и корпоративные риски; объекты интеллектуальной собственности; трансфер технологий; управление интеллектуальной собственностью в бизнесе; франшиза.

Аннотация. С целью изучения современного состояния и проблем рынка интеллектуальной собственности был проведен анализ актуальных тенденций в этой области. В результате проведенного исследования выявлены следующие особенности рынка интеллектуальной собственности: активно происходит коммерциализация интеллектуальной собственности и трансфер технологий, формируются принципы организации франшизы, как на отечественном, так и на мировом рынке, решаются проблемы в области налоговых и корпоративных рисков при использовании объектов интеллектуальной собственности.

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On the Problem of Urban Development in Norway at the Turn of the 19th and the Beginning of the 20th Century

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Key words and phrases: architecture of the 19th–20th centuries; regionalism; Scandinavia; synthesizing classicism; urban planning.

Abstract. The paper examines the genesis of urban planning in the architecture of Norway at the turn of the 20th century. Regional features of the experience of planning and development of residential areas are analyzed. The purpose of the study is to identify the characteristic patterns and the influence of regional features of urban planning policy on the structure of the most significant cities in Norway (Oslo). The methodological basis of the research is the formal-stylistic method, which allows us to trace in detail the genesis of various formal concepts. The scientific novelty lies in the consideration and identification of the regularities of the formation of urban development trends in Norway at the turn of the 20th century. The research results are as follows: the analysis of urban planning policy is carried out, the city-forming principles of the considered period are described, and conclusions are drawn on the dominance of individual images and architectural trends. The theoretical and practical significance of the work lies in the fact that the revealed patterns of the relationship between architectural and urban planning characteristics of buildings will supplement the relevant sections of the theory of architecture and can be used in the study of architecture and urban planning of cities in Scandinavia.

The emergence of urban planning principles for the development of residential areas in the Scandinavian countries, in view of a number of circumstances associated with their political and economic development, isolated geographical location, differs in many respects from the practice of design and construction in other European countries and the countries of the Baltic region.

Only in 1814, after the Napoleonic Wars, Norway dissolved the union with Denmark and entered into an alliance with Sweden, and Christiania (Oslo) regained its capital status. The 19th century was marked by the construction of the most important symbols for an independent

state: the Royal Palace (1825–1848), the building of Storting – the Norwegian Parliament (1861–1866), the university, the National Theater and the Stock Exchange. In 1850, the population of the capital exceeded the number of inhabitants of Bergen (the capital of medieval Norway), and now the title of the capital was fully justified.

With the exception of public infrastructure, urban planning has generally consisted of a detailed settlement of exclusively land use issues based on regulatory frameworks limited to urban agglomerations. At that time, only a smaller part of the population lived in cities. Therefore, urban planning policy was limited to the country's tiny urban settlements. This does not mean that European architectural trends and urban planning principles were unknown to the authorities, or the population living in small and disparate cities. For example, Renaissance urban street grid principles were introduced as early as the mid-1600s in the design of fortified cities, as well as in planning for the rebuilding of cities after devastating fires. After a devastating fire in 1624, Christiania underwent significant changes: a new network of roads was laid around the Akerhus castle, all manufactories and workshops were to be located inside the new city center [5]. The new city was built according to all the principles of the Renaissance: correct geometric proportions; streets up to 15 m wide, crossing each other at right angles. The new central part of Oslo – or now Christiania - was often called the Quadrature for its perfectly consistent forms [4].

However, new ideas for urban architecture and urban planning came to Norway relatively late. Nevertheless, the normative character of urban planning plans had, apparently, an earlier origin. As early as the end of 1200, Norwegian city rules emphasized the need to separate any industrial or handicraft activity that causes pollution from the areas where people lived or gathered. The major planning laws and regulations have been passed in accordance with the needs of each city.

In the 1840s, state planning laws were introduced for the largest cities, requiring these urbanized areas to become urban municipalities. Outside of these municipal areas, there was no fixed jurisdiction for any urban planning activity. The urban planning document was a kind of land use regulation scheme for individuals and regulated the size of the projected buildings depending on their purpose, including the city infrastructure.

The choice of the period under consideration is not accidental; it was in 1845 (in the year of the population census) when a tendency towards a sharp increase in population growth in cities was revealed. Although the modern concept of “urbanization” has no direct connection with the increase in the urban population, 1845 was an important chronological milestone in the study of the evolution of urban planning in Norway. The intensive influx of the population into the cities put forward before the Scandinavian city planners the problem of decompaction of old industrial centers and the ensuing tasks of creating new comfortable suburban areas. In the middle of the 19th century, the authorities began to abandon the understanding of the city as a static object, the first precedents for the inclusion of suburbs within the city boundaries appeared, the concept of the formal status of the city appeared. Between 1839 and 1850, many attempts were made to unite the city and rural suburban settlements, but these unions were part of a large-scale idea to accelerate Norwegian economic modernization by developing the infrastructure of the inland rural areas. This is especially important because until the 19th century, only those settlements that were on the coast and were active in export trade had the status of a city. Among other urban planning innovations adopted by the government were: the improvement and construction of new transport routes, the abolition of restrictions on trade and production, the creation of a railway, etc.

The first town planning legislation was introduced in the Norwegian capital Kristiania in

1827. A few years later the cities of Bergen and Trondheim followed suit – the local governments presented the Building Act to all Norwegian municipalities in 1837 and in 1845 to the National Assembly (Storting). The law established the construction and planning commission, composed of four officials and two politicians, and reporting directly to the king. The instructions were as concise and clear as possible – the city's layout should be based on a rectangular lattice of streets, at least 12.5 meters wide, the size of the block should not exceed 4,000 m², with the exception of the capital, it was allowed to erect wooden houses, but not higher than 2 floors; the changes also affected the height and angle of inclination of the roofs of the building and the distance between adjacent buildings. The consequence of the adoption of the Law was the physical transformation of many ancient cities and the reorganization of the central parts. The orbit of the enlarged regions includes the spontaneously arisen suburban buildings that have arisen earlier.

Despite the fact that the idea of the city as a central place in the region appeared only in the first third of the 19th century, the idea of the city as a center of production was even less popular and began to develop only in the second half of the 19th century. Planning models of Norwegian cities often copy the planning structure of cities in Sweden, Finland and even Denmark, despite the fact that most cities are located on flat terrain, and Norwegian built-up areas were often with pronounced relief. Thus, a rectangular sect of streets was practically impossible under these conditions, and if this condition was met, then the streets became too steep for vehicles.

The relatively late industrialization and the dispersed nature of the industry resulted in the presence of vast undeveloped areas in the suburban areas. Thanks to this, as well as the lower price of land plots outside the city limits, favorable conditions were created for construction on a new planning basis. The first changes affected, of course, the Norwegian capital Christiania (Oslo). The reconstruction of the central part of the city led to the appearance of an orthogonal grid of streets (often without regard to the terrain) and areas with stone apartment buildings (until that time, stone houses in Christiania were rare). Christiania's new plan was undoubtedly copied from the 1866 Stockholm city plan (the architect Lindhagen), and the idea for apartment blocks came from Germany. The ideas of "Berlin architecture" were brought to Norway by architects and engineers who studied in Germany (in Norway itself there was no architectural school until the beginning of the 20th century). The new urban development ideas resulted in Grunerlokka, the largest new housing development for workers, which appeared in the eastern part of the city and included 35,000 apartment buildings.

When Norway gained independence from Sweden in 1905, the search for a national style began to be reflected in urban planning, and the original idea of the same rectangular street layout for all cities was sharply criticized [7]. The planning for a new Oslo city center after 1905 entailed the creation of many public buildings such as a new building of the Town Hall, the new Courthouse, the National Theater and the National Museum. The town hall was founded only in 1931, and the redevelopment of the surrounding area itself took place only after the Second World War, however, some buildings were completed before the beginning of the XX century. These buildings, together with a small number of other structures of a new type, formed Oslo as a modern capital [2, p. 242].

In the early 1900s, the city had almost 250,000 inhabitants and the first global changes in the city's urban fabric began. It had many impressive large commercial buildings with an elevator. In the capital, electric trams, electric street lighting appeared, the telephone network was expanded and, ultimately, even a city-wide sewage system was installed.

Following a proposal from the Housing Emergency Committee (bolignødkomite) in 1911,

there was extensive political and financial support for construction companies. After 1913, due to a sharp increase in the number of inhabitants of the largest cities in Norway, a new layout and new types of buildings in residential areas were required, but it turned out that only small cities (Alesund) could be massively built in the national style, it was not suitable for Trondheim and Oslo, therefore it was necessary to turn to neoclassicism. Classicist motives were reflected not only in public building projects, but also in private buildings, mainly in the central districts of Christiania Frogner and Mayorstuen. Many of them repeat the classic style of the National University of Christiania, built in 1841–58 by C.H. Grosh, but, of course, on a much smaller scale. In mass construction, this style was used due to the simplicity and ease of execution of the basic structural and decorative elements that allow unifying the construction process. Gradually, whole streets and quarters were formed, where neoclassical buildings became decisive. Unfortunately, most of these were ordinary buildings, more eclectic than classic. The desire to avoid the monotony of multi-tiered flat facades, to give them plasticity, the play of chiaroscuro forced to enlarge individual elements, maximally monumentalize the order, introduce multiple sculptural decorative inserts [3, p. 204]. From 1912 to 1930 there was a boom in housing construction in Oslo; many projects were already implemented outside the walled city with funding from the municipalities, first Tøyen 1912 later Lille Tøyen garden city, Ullevål Hageby, Lindern, Torshov, North Hill, Rosenhoff, Vøyenvolden, Essen Lokken and Ila.

New ideas for urban transformation also came from Europe, where all the shortcomings of the past urban planning ideas had already emerged: overpopulation of cities, constant expansion of buildings, monotonous urban planning plans, often devoid of individuality, and ignorance of the social and environmental aspects of the urban environment. Also, the garden city movement began in England at the turn of the twentieth century, and almost immediately spread to the continent – under the influence of the Volksgeist discourse [8]. Thus, regionalism was transferred from theoretical to more practical spheres: starting from about 1900, many architects and critics argue that it is necessary to use only local materials during construction, to observe construction and stylistic traditions. New buildings should be in harmony with their surroundings and emphasize regional architectural traditions. After the First World War, this kind of national romanticism became very popular in architecture – residential buildings, villas and even monumental buildings were built in the style of national romanticism. The first Norwegian project in the newest garden city style can be considered the project of the Christiania suburb of Ullevål by the architect Oskar Hoff. The project, based on the preservation of the existing landscape, was designed for 5,000 residents living in terraced apartment buildings. In 1912, the architect presented a conceptual plan for municipal housing, where the height of the house was limited to three floors, green buffer zones were provided between the building blocks, and insolation was taken into account, for the first time houses were grouped in parallel closed rows.

The year 1924 marked a decisive step towards an expanded unitary planning system when a new building law was passed for all urban and even rural municipalities. The mandatory area of jurisdiction for planning under this law was still limited to the border of these municipalities. Since any rural municipality had the right to approve this law, it consistently entered into force in most municipalities. However, planning was understood as a social device for creating orderly land use and the provision of infrastructure services based on one category of plans – a zoning plan, which can be seen as a detailed plan for the development of urban areas. The rather limited territorial and functional scope of this law was soon challenged from two different positions. First, urbanization and urban expansion gradually lost the relevance of demarcating urban settlements and municipal boundaries as demarcation lines for land use planning. And secondly,

population growth and the development of transport technologies gradually expanded urban structures beyond municipal boundaries and generated the need for general urban planning that continuously encompasses urban settlements.

References

1. Aksenova, Z.L. Arhitekturnyj process v stranah Skandinavii v 1880–1930 gg. / Z.L. Aksenova // Arhitektura – stroitel'stvo – transport : materialy 72-j nauchnoj konferencii professorov, prepodavatelej, nauchnyh rabotnikov, inzhenerov i aspirantov universiteta (5–7 oktyabrya 2016 g.) : v 3 ch. CH. I. Arhitektura i stroitel'stvo; SPbGASU. – SPb., 2016. – S. 215–218.
2. Aksenova, Z.L. K probleme voznikoveniya skandinavskogo neoklassicizma / Z.L. Aksenova // Aktual'nye problemy sovremennoj nauki : sbornik materialov mezhdunarodnoj nauchno-prakticheskoy konferencii : v 2 ch. – Ufa : Aeterna, 2014. – CH. 2. – S. 240.
3. Aksenova, Z.L. Etapy razvitiya neoklassicizma v arhitekture Norvegii / Z.L. Aksenova // Obshchestvo, nauka i innovacii : sbornik statej Mezhdunarodnoj nauchno-prakticheskoy konferencii : v 2 ch. – Ufa : Aeterna. – 2015. – CH. 2. – S. 203–206.
4. Brekke, N.G. Norsk arkitektur historie / N.G. Brekke, m.fl., 2003.
5. Gunnarsjaa, A. Norges arkitekturhistorie (in Norwegian bokmål) / A. Gunnarsjaa. – Oslo : Abstrakt, 2006.
6. Donnely, M. Architecture in the Scandinavian countries / M. Donnely. – London, 1992.
7. Lending, M. Omkring 1900. Utkast til en norsk arkitekturhistorisk topikk / M. Lending. – Arkitektur og designhøgskolen i Oslo, 2005.
8. Miller, L.B. National romanticism and modern architecture in Germany and Scandinavian countries / L.B. Miller. – Cambridge, 2000.

К проблеме развития градостроительства в Норвегии в период второй трети XIX – первой трети XX вв.

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Ключевые слова и фразы: архитектура XIX–XX вв.; градостроительство; регионализм; синтезирующий классицизм; Скандинавия.

Аннотация. В работе рассматривается генезис градостроительства в архитектуре Норвегии на рубеже XIX–XX вв. Анализируются региональные особенности опыта планировки и застройки жилых районов.

Цель исследования заключается в выявлении характерных закономерностей и влияния региональных особенностей градостроительной политики на структуру наиболее значительных городов Норвегии (например, Осло).

Методической основой работы послужил формально-стилистический метод, позволяющий подробно проследить генезис различных формальных концепций.

Научная новизна заключается в рассмотрении и выявлении закономерностей становления градостроительных тенденций в Норвегии на рубеже XIX–XX вв.

Результаты исследования: проведен анализ градостроительной политики, описаны градоформирующие принципы рассматриваемого периода, сделаны выводы по доминированию отдельных образов и архитектурных тенденций. Теоретическая и практическая значимость работы заключается в том, что выявленные закономерности взаимосвязи архитектурных и градостроительных характеристик зданий пополнят соответствующие разделы теории архитектуры и могут быть использованы при изучении архитектуры и градостроительства городов Скандинавии.

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