

Factors of Development of Insurance of Small and Medium-Sized Businesses in the Conditions of Digitalization

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ABSTRACT

Small and medium-sized businesses are less protected from external shocks than large corporations and cannot always independently ensure an adequate level of their economic safety. In the conditions of digitalization, insurance, along with government financial support, can become an effective tool for protecting small and medium-sized enterprises from risks and threats. The article studies the mechanisms of the influence of a number of factors on the development of insurance in the field of small and medium-sized entrepreneurship. Analysis of official statistics, content analysis of regulatory legal acts and expert opinions allowed to identify the negative effects of the influence of factors and develop recommendations for their neutralization. As a result of the use of digital technologies in insurance activities, new insurance services and products appear, the efficiency and profitability of insurance activities in general increases, and the socialization of insurance relations is implemented.

Keywords: *digitalization, insurance, small and medium-sized entrepreneurship, factors, pandemic*

1. INTRODUCTION

With the growing awareness of the potential of innovation, represented by digital technology, insurance companies are increasingly applying digitalization in their activity. Study results of A. Bohnert et al. [1], showed positive results of digitalization, which are especially strong in cases, where companies have a comprehensive approach to the implementation of digital technologies both within their organization and in external activities with customers and business partners. The comprehensive application of digitalization leads to a decrease in the social risks of the digital economy by insuring them [2].

Florian Leppert et al. [3] studies analyze the strengths and weaknesses of the German digital economy, paying special attention to the insurance of small and medium-sized businesses (SMEs). The study, based on literature reviews, expert interviews, and workshops, showed, that the digital economy of SMEs is influenced by a heterogeneous environment, in which there are both stimulating and hindering factors, hindering development. The biggest weakness in the results is the lack of a business model and the difficulty in reimbursing insurance. Moreover, private users are not willing to pay for digital services. A large number of exceptions from the rules make implementation even more difficult, especially for SMEs. Thus, this practice makes it difficult to quickly spread digital services in the German insurance market.

The activities of small and medium-sized businesses, in comparison with large corporations, are less protected from risky situations. This is primarily due to the limited

resources, that do not allow creating a sufficient “financial safety bag” and ineffective management.

The coronavirus pandemic became a serious challenge for global and domestic businesses, especially for the small and medium-sized business segment. In conditions massive self-isolation and quarantine measures, small and medium-sized enterprises faced such threats as reduction and non-fulfillment of orders, which in turn spurred a drop in income and profits and an increased likelihood of bankruptcy.

2. RESEARCH METHODOLOGY

The methodological basis of the study is systematic and comparative analysis, causal analysis, observation, comparison and grouping, as well as the methodology of the innovation-diversification approach. The study of factors is based on a dialectical approach. Statistical methods and general scientific principles of generalization and modeling were used. In this study, hierarchical methods were mainly used, where a sequential algorithm is used to divide a given set of elements into subordinate subsets. According to these methods, subsets form a unified classification system for a distributed set with interconnected subdivisions, a whole, in which all parts are interconnected and subordinate in a certain way [2].

3. RESEARCH RESULT

The negative financial implications of the pandemic are still difficult to assess due to the lack of official statistics. But it is known about the smashup and closure of businesses, the most affected industries: culture, leisure and entertainment, sports and recreation, public catering and hotel business, etc. The pessimistic forecasts of experts about the smashup of one-third of SMEs by July 2020 did not come true, however, unfavorable trends in the number of SMEs are already being traced (Fig. 1).

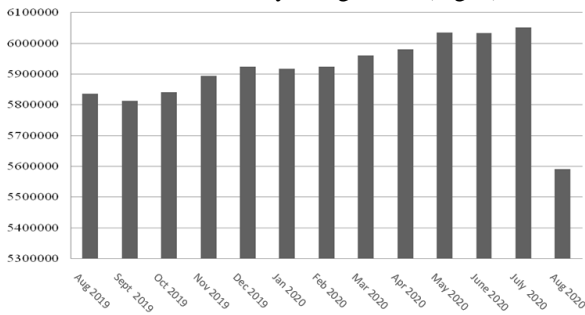


Figure 1 Dynamics of the number of SMEs, units [4]

The decrease in the number of SMEs in August 2020 compared to the same period in 2019 amounted to 246,829 units, compared to the beginning of this year - 326,825 units. This happens, because small and medium-sized enterprises are more vulnerable to external shocks than large ones, they react more strongly to higher transaction costs, and in an economic crisis conditions they are the first to be in the firing line. The 2020 crisis could force a significant number of entrepreneurs to go out of business; which, in turn, can undermine not only the economic resilience, but also the foundations of the country's long-term socio-economic development [6].

The dynamics of the index, which is presented (Fig. 2), also testifies to the unfavorable processes in the field of SMEs. The RSBI Opora Index is used by experts to assess business activity in the small and medium-sized business segment. If the RSBI value is more than 50 points, then it is considered, that the "business mood and financial well-being" of enterprises is improving. And vice versa, if the value of the index falls below 50 points, conclusions about a decrease in the business activity of SMEs are drawn.

In Fig. 2, it can be seen, that the RSBI index demonstrates a steady decline in the business activity of SMEs in the period from February to April 2020. Then, against the background of the adoption and implementation of state support measures, a slight improvement in dynamics begins. By August 2020, the RSBI index value rises up to 47.0 points, but does not reach the threshold.

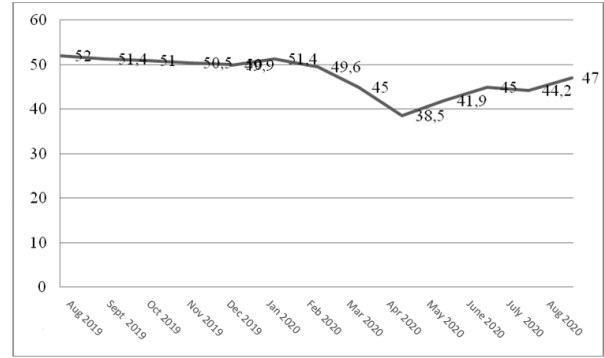


Figure 2 Dynamics of the RSBI Opora Index points [7]

In the conditions of a pandemic, SMEs are not able to independently ensure an adequate level of financial safety and need both government financial support and market protection instruments.

In countries with developed market economies, insurance is one of the effective market instruments of financial support and protection of SMEs from risks.

The efficiency of this tool depends on many objective and subjective factors: the level of insurance culture of society and business; sufficiency of free financial resources; affordability of insurance rates and the level of development of the potential of the insurance market.

Assessment of the development potential of the domestic insurance market allows to reveal how favorable its environment is for the use of insurance by SMEs [8, 10].

The results of the study and assessment of the dynamics of key indicators, characterizing the development potential of the insurance market in the Russian Federation, are presented in Table 1.

An important indicator is the share of collected insurance premiums to GDP. In Russia, over the past four years, the value of the indicator has not exceeded 1.4%, which demonstrates the insignificant contribution of the industry to the economy. In the EU countries, the USA and Japan, the value of the same indicator varies from 7 to 13%, which accordingly demonstrates a high level of development of insurance relations. Unfortunately, the growth of the "output-capital ratio" indicator in 2015-2018 cannot be regarded as a positive trend, since the growth occurred against the background of a steady decline in the number of insurers, and, accordingly, a decrease in the total ownership capital. In 2019, the output-capital ratio declined sharply under the influence of two factors; a 2.5-fold increase in the total ownership capital of insurers and an almost zero increase in the volume of insurance premiums. To assess the density of insurance, we will use the indicator "size of the insurance premium per head of the population". The value of the indicator is very low, although it had positive dynamics in the analyzed period. In terms of insurance density, our country is in 48th place. The Russian Federation is inferior even to countries such as Namibia and Venezuela, although the pace of economic development of these countries lags far behind the pace of development of the Russian economy. In developed markets, the per capita volume of insurance turnover has

long exceeded \$1,000, and in the leading countries, it has reached \$3,000 [9].

Table 1 Indicators of the insurance market of the Russian Federation [9]

Indicators	2015	2016	2017	2018	2019
Ratio of collected insurance premiums to GDP, %	1.2	1.4	1.4	1.4	1.4
Output-capital ratio of insurance organizations, shares	5.1	5.2	6.0	7.0	2.8
Insurance premium per head of the population, rubles	7,047.4	8,092.6	8,733.4	10,130.4	10,127.0
Payoff ratio, %	49.8	43.3	40.0	35.2	41.4

A steady downward trend in the payoff ratio is typical for types of insurance with a low loss ratio. Abroad, this indicator on average varies in the range from 70% to 90% and indicates a significant share of insurance products with a high probability of occurrence of the insured event. In addition, the investment market allows foreign insurers to cover losses from insurance with profits from investments. Assessment of the potential of the domestic insurance market allows to make a conclusion about the unfavorable environment for the development of insurance in Russia, both in terms of the efficiency of insurance, as a tool, and in the aspect of business interest in it.

At present, insurance is perceived by SMEs as an “imputed burden”. In our opinion, this is facilitated by the following unfavorable factors: high cost; lack of insurance products, focused on the needs of small and medium-sized entrepreneurship; ineffectiveness (absence) of advertising, which allows to better learn about the benefits of certain insurance services; insufficient qualification level of professional participants in the insurance market; lag in digitalization processes in the insurance business.

Insurance entities need to form an innovative model of relations, focusing on the provision of high-quality and affordable insurance services to businesses and the public [11]. The formation of an innovative model of interaction between insurers and small and medium-sized businesses should be based on the study of factors, that stimulate their use of insurance in the conditions of digitalization.

Consider the mechanism of the influence of a number of factors that, under other favorable conditions, should contribute to the development of insurance for SMEs (Fig. 3).

Tax regulation contributes to the development of various processes, both in the economy and in the social sphere.

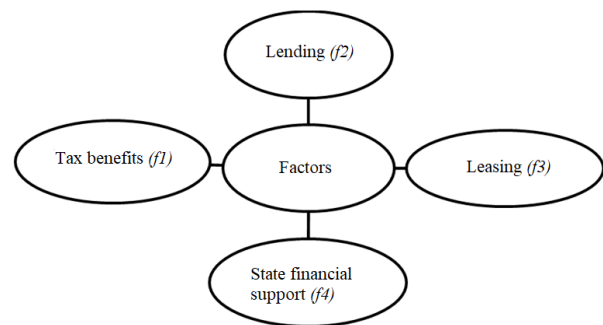


Figure 3 Factors, stimulating the development of insurance by small and medium-sized businesses

Tax benefits are an important element of the tax-based regulation mechanism.

In accordance with Article 263 of the Tax Code of the Russian Federation, costs on compulsory and voluntary types of insurance are included in other costs in the amount of actual expenses. Consequently, SMEs, that pay a single tax on imputed income or use a system, in which the object of taxation is income, are automatically deprived of this benefit. The inclusion of insurance costs in the mandatory list of costs, that reduce the taxable base in any system of taxation of SMEs, will increase the galvanizing effect of the considered factor.

In conditions of limited own resources, SMEs are forced to use borrowed sources of financing.

In 2020, there is an increase in the dependence of SMEs on debt financing against the background of a decrease in their own income and an increase in the affordability of concessional lending. The assumption about the positive influence of lending

on the development of insurance in the segment of small and medium-sized entrepreneurship did not find confirmation in the official statistics.

According to the results of a survey, conducted by the Bank of Russia in 2019, it turned out, that only 30% of SMEs purchased voluntary insurance certificates. Insurance premiums under these contracts amounted to about 2% of the total premiums received [12].

Currently, SMEs can take advantage of a number of programs, implemented within the framework of state support for concessional lending and its stimulation (Fig. 4).

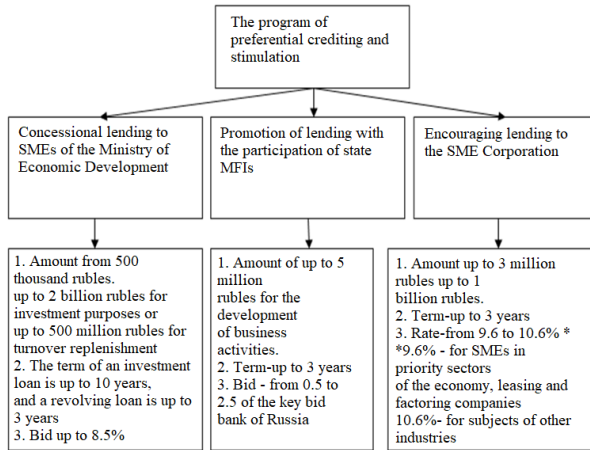


Figure 4 Programs of concessional lending to small and medium-sized businesses

An analysis of the content of concessional lending programs showed, that they did not include a mechanism for the mandatory use of risk insurance, which is a significant flaw in the legislation. The use of insurance, in combination with concessional lending, would, on the one hand, minimize the risks of non-redemption of loans, and, on the other hand, would contribute to its popularization in the SME segment. It was also necessary to provide in these programs a mechanism for subsidizing insurance rates, which would increase the level of affordability of insurance products. Thanks to the omission of legislators, commercial banks and microfinance organizations (commercial and state-owned) have the opportunity to "impose" insurance services at supracompetitive fares in order to receive commissions.

Leasing can be a significant factor in the development of insurance in the segment of small and medium-sized entrepreneurship. In the process of a leasing transaction, participants in a leasing transaction are advised at the legislative level to insure the leased asset, as well as business and financial risks.

The lessee is entitled to insure the risk of his liability for violation of the leasing agreement in favor of the lessor. On a mandatory basis, the lessee must insure his liability for the fulfillment of obligations, arising from harm to the life, health or property of other persons in the process of using the leased property (in cases, determined by the legislation of the Russian Federation). In 2018, the lease portfolio increased by 24%, moreover, almost a third of transactions fell on small companies. The use of financial leasing allows SMEs to upgrade production capacity without diverting own capital from circulation and to obtain a number of economic benefits in the field of taxation. At the same time, small and medium-sized enterprises are permitted to appreciate the benefits of insurance as a way to manage risks. Having a positive experience of working with insurers, enterprises continue to insure their property and liability even after the end of the leasing agreement.

4. DISCUSSION OF RESULTS

Currently, the Ministry of Economic Development and Trade is actively implementing concessional leasing programs for SMEs, which, in turn, stimulate the development of insurance. The equipment, designed by the program, is provided without an initial advance payment at concessional interest rates: 6% for Russian equipment, 8% for foreign equipment. Thanks to the implementation of these programs, about 200 leasing projects received support. The largest share of financed leasing projects in the portfolio falls on the machine industry (17.8%), chemical industry (16.3%), food industry (14.9%), metallurgy (12.7%), textile industry (5.8%), as well as agriculture, forestry, hunting, fishing (5.6%) [13].

State financial support can become another priority factor of the development of insurance for SMEs. In world practice, state aids for insurance premiums have been practiced for a long time. In domestic practice, such a mechanism is used in agricultural insurance, but there is no reason to consider it effective yet. Agriculture, like no other industry, is exposed to a variety of risks, caused by natural disasters: droughts, floods, hail, etc. For example, in 2019, about 2% of the total crop area died from unfavorable natural phenomena, in total, the total harm to agricultural producers amounted to about 13 billion rubles. Drought and freezing of crops, fires and floods in 2019 occurred in 25 regions. Losses to farmers was reimbursed from the federal budget, although this money could have gone to economic development or social programs.

Figure 5 shows, that the minimum part of the crop area is insured in Russia, therefore, a high share of subsidies is not an indicator of active use of insurance. In accordance with the legislation, enterprises are provided with budget subsidies to reimburse part of the costs of paying insurance premiums under agricultural insurance contracts.

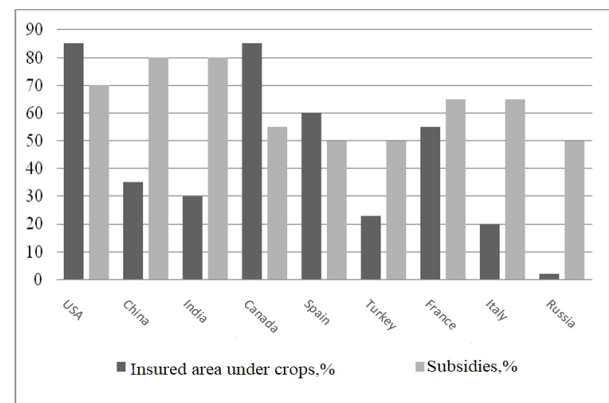
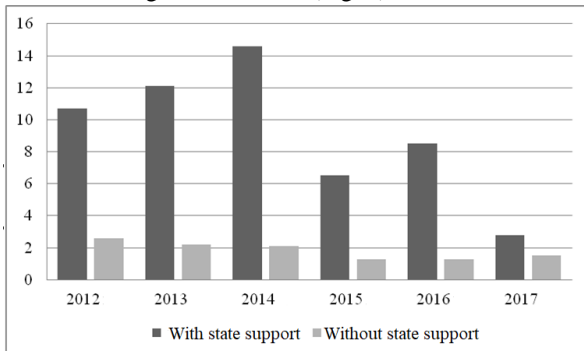


Figure 5 Largest agricultural insurance markets in 2017 [14]

Agriculture employs 53,228 small enterprises and 1,705 medium-sized enterprises, so state aid for insurance premiums can significantly reduce their costs.

The effect of the factor under consideration can be judged by the dynamics of insurance premiums from the insurance of agricultural risks (Fig. 6).



Compiled according to [14].

Figure 6 Dynamics of agricultural risks insurance premiums in the Russian Federation, bln RUB

It can be seen in Fig. 6, that insurance with state support has a clear advantage, although, in general, the amount of insurance premiums for agricultural risks is decreasing. Studies show, that the development of agricultural insurance is prevented by: the high cost of insurance, associated with the likelihood of occurrence of the insured event (most of the farms are located in the zone of risky farming); the fixed nature of the key insurance conditions, which does not allow taking into account the specifics of the agricultural business; the complexity of the procedures for the conclusion of an insurance contract, its support and settlement of losses. Agricultural producers also note the complexity of the procedure for obtaining the subsidy itself, due to bureaucracy. Thus, the system of state aids for insurance of agricultural risks needs to be improved, namely: an increase in the “minima” of crop loss in normative acts, allowing enterprises to insure crops at any level of crop loss; movement of the insurance subsidy out from the “unified subsidy”; development of more flexible programs for areas with high-risk farming.

Thus, state aids for insurance premiums can become one of the ways to improve financial support for small and medium-sized entrepreneurship. Of course, state support should not be provided to all SMEs, but only to those, who operate in priority sectors of the economy.

Analysis of the main directions of digitalization of insurance (e-commerce, cyber risks, against electronic and computer crimes, reflecting the emergence not only of the digital economy and the implementation of new technologies, but also new risks, generated by them) and new technologies in the practice of mass insurance (internetization, digitalization and individualization of insurance activities). It is possible to conclude about the development of digitalization of insurance, since, as a result of the use of digital technologies in insurance activities, new insurance services and products appear, the efficiency and profitability of insurance activities in general increases, and the socialization of insurance relations is being implemented [15].

It should be noted, that the identified problems are much easier to solve in the conditions of the digitalization of the economy and the insurance market. Modern technologies have an increasing influence on all spheres of business and life of society. In 2017-2018 insurance organizations lagged behind other financial market institutions in terms of the rate of technology implementation. Thanks to a wide range of innovations, implemented into complex business processes of insurance activities, the lag was not only overcome, but in the conditions of quarantine and self-isolation, InsurTech received a powerful impetus.

The acceleration of digitalization processes allowed insurers to rub through the current economic shock and increase the affordability of services for SMEs. Against the background of the increased need for the provision of remote services, insurance products, taking into account the needs of small and medium-sized entrepreneurship, began to appear. The development and use of mobile applications expanded the capabilities of insurers for operational inspection of property and remote settlement of losses. A survey of insurance market participants, conducted by the "Expert RA" agency showed, that the share of insurance organizations using in 2019 IT solutions in the sales process of insurance products is close to 100%. About 85% of the surveyed insurers provide customers with the opportunity to calculate and purchase an insurance certificate on their website or mobile application, 58% of respondents - to apply for insurance adjustment through the website or mobile application. Almost half of insurers allow their clients to fully settle an insured event through remote services without visiting the company's office. According to the estimates of the "Expert RA" agency, the total volume of the e-insurance segment (excluding MTPL) in 2019 increased by 40% compared to 2018, reaching 17 billion rubles [15].

Thus, at present, favorable preconditions have been formed in Russia for the development of digitalization, which, in turn, allows insurers to quickly respond to requests from SMEs. The “reverse side of the coin” of digitalization also should not be forgotten. Fraudsters, taking advantage of the crisis, intensified their activities on the Internet in order to seize the money of the insured.

5. CONCLUSION

Study and analysis of factors, stimulating the development of insurance in the field of small and medium-sized entrepreneurship, showed, that along with their positive influence, there are also negative effects due to the underdevelopment of the insurance market infrastructure and the low insurance culture of business and society.

The identified problems and contradictions require an integrated approach to their solution.

First, it is necessary to revise and adopt a new Strategy for the development of insurance activities in the Russian Federation, which ends in 2020.

The improved Strategy should contain a set of measures, that ensure the transition of the industry to an intensive path of development, the competitiveness of insurers and

mutual insurance societies, and increase the interest of businesses and the population in insurance. When developing budgets, public authorities should provide for an item of expenditures for subsidizing insurance premiums to SMEs, engaged in high-tech or priority economic activities in terms of national security. Insurance organizations should develop high-quality insurance products, taking into account the territorial and regional features of the functioning of SMEs.

A promising direction in the development of insurance can be the state aids for insurance premiums to SMEs and the provision of guarantees by the Small and Medium-sized Enterprise Fund when concluding voluntary property insurance contracts.

Secondly, it is advisable to improve the mechanism for providing tax benefits, increasing their affordability, both for entrepreneurs and for insurers. SMEs, using the simplified taxation system (if the object of taxation is income), should be provided with the opportunity to reduce the taxable base by the amount of paid insurance premiums. For insurers, deductions from insurance premiums for SMEs to the reserve of preventive measures shall be recognized as costs for tax purposes.

Third, it is necessary at the regulatory level to improve the mechanism of interaction between financial market participants: insurance entities, commercial banks, leasing companies and other participants. It is necessary to

eliminate the practice of “force insurance” and develop market levers to stimulate the purchase of insurance products by SMEs.

Fourthly, further digitalization of business processes should become a driver of insurance development. Digitalization of the model of interrelations between insurance subjects and SMEs will allow developing products and services faster, making them convenient and affordable for policyholders, and, at the same time, reducing the cost of insurance operations.

It is advisable for the Bank of Russia to accelerate the development and launch of the Marketplace for the insurance sector. Transfer of insurance services to a digital environment will significantly increase the level of their affordability for SMEs.

To mitigate threats from cyber fraudsters, all insurance products, provided remotely, must have cyber protection.

When implementing these measures, insurance will take its rightful place in ensuring the economic safety of small and medium-sized businesses. The digital transformation of the interrelations between insurers and SMEs will not only enhance the role of insurance as a tool of risk coverage, but will also ensure the sustainable development of the domestic insurance market.

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REFERENCES

[1] A. Bohnert, A. Fritzsche, S. Gregor, Digital agendas in the insurance industry: the importance of comprehensive approaches, *Geneva Pap Risk Insur Issues Pract* 44 (2019) 1–19. DOI: doi.org/10.1057/s41288-018-0109-0

[2] M.K. Chernyakov, M.M. Chernyakova, K.C. Akberov, Dynamic model of social risks in the digital economy, *Advances in Economics, Business and Management Research*, vol. 81: MTDE 2019, pp. 373-378. Doi: 10.2991 / mtde-19.2019.71

[3] F. Leppert, J. Gerlach, D. Ostwaldet et al., Strength and weaknesses of the German digital health economy, *Gesundheitswesen*, 80 (11) (2018) 946-952

[4] Unified register of small and medium-sized enterprises regime. <https://ofd.nalog.ru/index.html>

[5] S.A. Chunikhin, Modeling the Development Dynamics of Small and Medium-Sized Enterprises in Russia, *Amazonia investiga*, 9 (27) (2020) 116-128 DOI: 10.34069 / AI / 2020.27.03.12

[6] A.N. Maloletko, O.V. Kaurova, A.N. Ermilova, V.A. Oganyan, Y.V. Steklova, Approaches to the study of factors stimulating the development of cooperation between large and small businesses in Russia and the republic of Belarus, *Studies in Systems, Decision and Control*, 316 (2021) 325-334.

[7] PSB Analytics and Strategy, Magram Market Research. <https://opora.ru/upload/iblock/fa2/fa25623b960fe6871b05510fd2df1c91.pdf>

[8] E. V. Kostyaeva, N. I. Aksenova, Sustainable development of the insurance market as a factor for securing the state economic security, *Economics and Entrepreneurship*, 9-3(86-3) (2017) 1065-1070.

[9] Official site of the Federal State Statistics Service. <https://rosstat.gov.ru/folder/11192>

[10] E. V. Kostyaeva, I. V. Plotnikova, Insurance market potential as the factor of ensuring economic security: methodological aspects, 4 Int. multidisciplinary scientific conference on social and

arts, SGEM 2017: conf. proc., Bulgaria, Sofia: STEF92 Technology Ltd., Book 1, vol. 3, pp. 405-413, 2017.

[11] M. K. Chernyakov, M. M. Chernyakova, K. C. Akberov, Simulation design of manufacturing processes and production systems, *Advances in Engineering Research*, 018. - vol. 157: Actual issues of mechanical engineering, AIME 2018, Novosibirsk, pp. 124-128, 2018. DOI: <https://doi.org/10.2991/aime-18.2018.24>

[12] Review of key performance indicators of insurers No. 4, 2019. <https://cbr.ru/insurance/analytics/>

[13] Ministry of Economic Development of the Russian Federation. <https://covid.economy.gov.ru/sredniy-biznes>

[14] Union "The United Association of Insurers of the Agroindustrial Complex - National Union of Agricultural Insurers", Annual Report 2017 Agricultural Insurance for Russia, 2017.

[15] P. Singh, S.K. Sarangi, Applying Digitization for improving insurance business: A case study on bajaj allianz general insurance agent's perception on role of digitization for band movement in the Pune region, Maharashtra, *Int. J. of Advanced Science and Technology*, 29 (5) (2020) 1108-1117.