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Industry peculiarities of technological sovereignty policy designs: the case of the civil aviation industry

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The civil aircraft building industry is one of the most high-tech sectors of the Russian economy, which is most dependent on imported components and technologies. Thus, the head of the Ministry of Industry and Trade of the Russian Federation D.V. Manturov believes that it is high-tech industries that are the most lagging behind in terms of import substitution, among which he named the aircraft industry, radio electronics, the rehabilitation industry, pharmaceuticals and power engineering [5].

Russian aircraft building products are poorly represented on the global market: for example, according to the state program of the Russian Federation "Development of the aviation industry for 2013-2025", its share at the moment is about 1% of the world export of civil aircraft and helicopters. Currently, the aviation industry supplies abroad 0.4% of engines, 1.5% of units, 2.6% of instruments, and 2.3% of aircraft (mainly military) [3].

According to the director of the Institute of Financial and Industrial Policy N.M. Abdikeeva, the main problems of the aircraft industry at present are:

- moral and physical depreciation of equipment;
- low level of training of managers and lack of experience in the preparation of mass production;
- insufficiently developed cooperative interaction and inability to work with partners;
- high age of leading specialists;
- low level of production automation [2].

According to the concept of the federal target program "Development of the aviation industry for 2013-2025", which takes into account the described problems, by 2025 Russia must solve the problem of forming a stable position for the civil sector of the industry and positioning the Russian Federation as a world center of aircraft manufacturing, capable of producing at least 5 % of the world volume of aviation equipment, including: in the field of aircraft construction - 4-5%; helicopter industry - 19.4%; engine building - at least 1% for civil aircraft and 7% for helicopters; in the field of aviation and instrumentation - at least 2.9% of the world market of units and systems and 11.2% of airborne systems [1].

However, apparently, it is precisely due to the fact that while Russian aircraft manufacturing companies are not able to produce such a large number of civil aircraft due to the existing sanctions restrictions, the Russian leadership decided to appropriate several hundred European airliners that are on lease in order to leave the national carriers the opportunity to maintain the fleet and continue to operate flights within the country. So, on March 14, 2022, the corresponding legislative amendments to the Air Code of the Russian Federation (Federal Law No. 56-FZ of March 14, 2022) were adopted, and already on March 22, 2022, Minister of Transport V. G. Savelyev announced that almost 800 aircraft leased by Russian aircraft airlines were transferred to the national register of Russia [8].

Speaking about the specific features of achieving technological sovereignty in the aircraft industry, it should be emphasized that a one-two-year shift is expected in the mass production

of the flagship models of the Russian aviation industry - Superjet 100 and MS-21. However, despite this delay, the aircraft manufacturing capacities free during the specified period will be involved in organizing the mass production of existing models - the Tu-214 and, if necessary, the Il-96-400, which have not been in great demand due to the relatively costly fuel efficiency. It also notes the presence of state support in the form of measures to curb prices for jet fuel [4].

Separately, it is noted about the already implemented research and successful testing of various aircraft systems. For example, a particularly successful completion of tests of a Russian composite wing is reported, which exceeded the design loads by 50%. It is also reported that while the Russian engine "PD-14" (intended mainly for the aircraft "MS-21") is going through the final stages of certification. At the same time, two MS-21 aircraft with Pratt & Whitney engines installed before the imposition of sanctions are transferred to the so-called controlled operation of the airline, which will carry out training on these aircraft, and the manufacturer in this case will be able to begin receiving the first data on the use of these aircraft. Work is also underway to create infrastructure and after-sales service: warehouses are being built, a stock of spare parts is being created, and all forms of maintenance are being mastered, so that by the time the operation begins, the entire infrastructure associated with the operation and operation of MS-21 has already been created [7].

One of the main advantages of the aircraft industry in comparison with other industries is the presence of an association of leading institutes of aviation applied science represented by the National Research Center "Institute. Zhukovsky, which contains the entire scientific potential of the domestic aircraft industry, which remains only to be realized. Speaking about the historical context of scientific developments in the aircraft industry, it is worth saying that, starting from 2014, domestic enterprises replaced part of the sub-sanctioned components with imports, and then Western countries introduced new restrictions, after which a new front of research and development work appeared, which largely prepared the domestic scientific aircraft building school for today's challenges [6].

References

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