*Инна Сергеевна Лола[[1]](#footnote-1), Мурат Булатович Бакеев (заявитель)[[2]](#footnote-2)*

*Тематическое направление:* *Наука и инновации.*

**Measuring technological and digital activity in the field of greening industrial enterprises in Russia: market trends of “green” modernization[[3]](#footnote-3)**

The development and implementation of comprehensive measures for decarbonization and “green” modernization implies the need to develop a methodology for measuring greening activity among industrial enterprises in order to track and quickly observe changes. The existing quantitative statistics toolkit in Russia does not fully reflect all aspects of technological and digital activity in the field of greening and increasing resource efficiency and requires development and adaptation to existing foreign research practices. An effective resource for expanding and supplementing the available quantitative data can be the apparatus of business tendency observations, containing qualitative statistics of measurements of the scale and trends of technological transformation at Russian industrial enterprises, collected within the framework of surveys harmonized and updated annually with existing world practices.

The purpose of the report is to present the methodological aspects of the development of business tendency monitoring in terms of measuring the technological and digital activity of industry in the field of greening manufacturing enterprises in Russia, launched at the Center for Business Tendency Studies of the Institute for Statistical Studies and Economics of Knowledge (CBTS ISSEK) of the Higher School of Economics in 2018. The following tasks are being implemented in the work: analytical description of the existing statistical toolkit through the presentation of a system of indicators and indicators used, updated annually; disclosing the conjugation of toolbox blocks with international templates; description of specific empirical research practice through the presentation of the results of monitoring industrial enterprises in this area for 2020. In addition, international research experience in measuring the processes of greening enterprises using composite indicators, which in their aggregated form are capable of sufficiently informatively reflecting key trends and the scale of the investigated phenomena, is analyzed. Opportunities for adapting existing methods of constructing indicators for calculating national composite indices are presented.

The analysis was based on quantified data from annual business tendency surveys of digital activity of Russian manufacturing enterprises for 2019-2020, including a set of indicators characterizing technological and digital activity in the field of greening and increasing resource efficiency. The results obtained indicate that despite the small scale of the current use of digital tools that contribute to the effective achievement of environmental goals and objectives in the ecological and economic production system in 2020, there was an active spread of activity in this area compared to 2019. In particular, the recorded trends were traced within the framework of measures aimed at improving energy efficiency, efficiency of water use and raw materials, as well as waste disposal. In addition, monitoring showed that respondents from most sub-sectors in 2020 expected the emerging positive trends to strengthen in the short term in all major areas of the green agenda. Among the sectoral leaders of greening in industry in 2020, we can name the automotive industry, the production of machinery and equipment not included in other categories, metallurgy, the production of electrical equipment, as well as the production of coke and petroleum products. In 2021, progress is expected in the pharmaceutical industry, as well as wearing apparel and furniture manufacture.

The totality of the trends identified and outlined in the study indicates that for Russia, expanding the depth and coverage of statistical observations of the process of greening industries, including with the help of an business tendency observation apparatus, is an urgent task that requires constant improvement of methodological support in terms of the tools used and data analysis, as well as construction of new meters, including the corresponding composite indicators.

Given the unprecedented challenges of the ongoing pandemic crisis and the still insufficient content of operational statistical data that can, in an expanded and up-to-date context, reflect the scale of digitalization and, in particular, its impact on the greening of the industry, the results of qualitative business surveys, in addition to quantitative estimates, are becoming an important complementary source of information. As the European experience shows, the perception of digital and green transformation as elements of the general process has a chance of becoming consensus one in the post-pandemic era, therefore, obtaining operational information on the use of digital greening in Russia is an urgent task.

1. Кандидат экономических наук. Национальный исследовательский университет «Высшая школа экономики», Российская Федерация, Институт статистических исследований и экономики знаний, Центр конъюнктурных исследований. Заместитель директора.: ilola@hse.ru [↑](#footnote-ref-1)
2. Национальный исследовательский университет «Высшая школа экономики», Российская Федерация, Институт статистических исследований и экономики знаний, Центр конъюнктурных исследований. Аналитик: [mbakeev@hse.ru](mailto:mbakeev@hse.ru) [↑](#footnote-ref-2)
3. Статья подготовлена в результате проведения исследования в рамках Программы фундаментальных исследований Национального исследовательского университета «Высшая школа экономики». [↑](#footnote-ref-3)