BGI consulting

Evaluation of changes in conditions of economic sectors in the competence area of the Ministry of Economy and innovation co-financed from European Union structural funds (Phase 3)

EVALUATION REPORT SUMMARY

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OBJECT, PURPOSE AND OBJECTIVES OF THE EVALUATION

The purpose of this **evaluation** is to update the monitoring system and the HERLIT-16 automated macroeconomic model for the sectors of the economy under the responsibility of the Ministry of Economy and Innovation (MoEI), which is co-financed by European Union (EU) funds. In order to achieve the stated objective of the evaluation, three **evaluation objectives** are set:

1. To complement the economic areas under MoEI's remit and co-financed by EU investment funds (Tourism, Business and Business Environment, Research, Experimental Development and Innovation, Energy, Human Resources) with an assessment of the state of play of the digitisation sector;
2. Identify the most appropriate economic, sector-specific and relevant financial monitoring indicators for the EU Structural Funds, taking into account that the data will be used to plan new measures for the 2021-2027 period and to assess their impact and return on investment, both over the whole period and at sectoral level;
3. Update and extend the model using updated indicators of the economic sectoral monitoring system, while maintaining the possibility for the user to update the statistical data needed for the modelling.

The subject of t**his evaluation** is the investment priorities and objectives of the Programme for the European Union funds' investments in 2021–2027 (2021-2027 Operational Programme), which fall under MoEI's remit, including Objective 1.2 of the Operational Programme for the period 2021-2027, "Reap the benefits of digitalisation for citizens, businesses, research organisations and public authorities".

THE EVALUATION PROCESS

The monitoring framework for economic indicators developed in the previous evaluation phases (I and II), on which the HERLIT-16 macroeconomic model is based, has been updated with monitoring indicators for a new area, **digitisation**.[1] .

First, a review of the academic and methodological literature on digitisation was carried out, providing a theoretical basis for identifying the most appropriate indicators in the field, and on the basis of this information, an in-depth analysis of four indicators was carried out to assess their reliability, representativeness and usefulness for monitoring the economy and for public policy planning and evaluation.

Finally, based on macroeconomic logic, two indicators to be modelled were selected: "Share of enterprises that sold goods or services (received orders) via computer networks" and the gross value added (as a percentage of total GVA) generated by the economic activity group "*J62_J63 Computer programming,*

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[1] Quantitative data and model architecture have also been updated for R&D (Research, Experimental Development and Innovation), BBE (Business and Business Environment), Energy, Tourism, Human Resources. The technical specifications and operational principles of the model are not discussed in this Evaluation Summary, as this was done in Phases I and II of the evaluation.

consultancy and information service activities". These indicators should be seen as the best reflection of the state of the digitalisation sector, as the former describes the degree of digitalisation of businesses and indirectly captures the level of digital literacy skills of the population; while the latter indicator describes, in nominal and percentage terms, the overall macroeconomic impact of the digitalisation sector. The remaining two indicators ("Persons who used information technology (Internet) daily in the last three months; "Businesses that used information obtained from government websites") are not suitable for modelling and it is proposed to monitor the changes in their values as a complementary context to the perception of digital transformation.

Using these four indicators, an assessment of the change in the state of digitisation was carried out, which showed that the values of the two indicators to be modelled in Lithuania grew quite consistently over the period 2000-2020, and that the state of digitisation can therefore be considered quite positive: for example, the share of companies selling goods or services via computer networks in Lithuania surpassed the EU27 average by 14.8% in 2021. As regards the dynamics of the group of economic activities, it is worth noting that although Lithuania is still lagging behind the EU27 average (according to 2020 data, the difference in terms of J62_J63 gross value added between Lithuania and the EU27 amounts to 0.5%), the gap is gradually decreasing.

The evaluation looked not only at academic literature or international practices to cover the entirety of digital transformation, but also at the context of public policy in this area in Lithuania - using empirical data, it was found that 76% of the population in Lithuania avoid asking for help if they encounter difficulties using digital technologies, therefore, it was suggested further research to explore the reasons behind this phenomenon. It was also suggested to continue data collection of the indicator "Persons who have used public e-services", as this indicator helps to indirectly quantify the level of accessibility and interoperability of e-services provided by public institutions (supply side) and the level of digital skills of the population (demand side). In addition, it is proposed to include a section on digital innovation in addition to the data published by the State Data Agency (SDA) on the innovation performance of enterprises, as this would better reflect the extent of digital transformation of businesses.

Data needed for the evaluation collected and processed on the basis of documents, secondary sources, SDA, Eurostat statistics and monitoring data, publicly available methodological and academic literature. The data collected were analysed using macroeconomic and econometric logic and expert judgement.

MODELLING THE IMPACT OF EU FUNDS INVESTMENTS IN DIGITALISATION BETWEEN 2021 AND 2027 USING HERLIT-16

According to data from MoEI, the total funding for the economic sectors under MoEI's remit (the sum of national public, European Commission and private funds) for the investment period 2021-2027 will amount to €1906.26 million, with the largest share going to Energy and R&D (€750.30 million and €561.51 million respectively). Digitisation has a total allocation of € 315.16 million.

The evaluation has modelled the impact of investments in each of the areas managed by MoEI on macroeconomic indicators, and found that in the peak year of financial interventions, investments in energy and R&D will have the highest impact on the annual GDP level, while those in Human Resources will have the lowest impact, and that funding in Energy and R&D will also have the highest impact on employment jointly, with around 8,200 new jobs expected to be created in the peak year of funding in these areas, compared to a no-investment scenario.

Given the object of the evaluation (the digitalisation domain), the **impact of investments in the digitalisation domain on key digitalisation indicators** (on specific sectoral indicators, i.e. the "**Share of enterprises that sold goods or services (received orders) via computer networks" and "J62_J63 gross value added"** were analysed. As regards the **share of enterprises selling goods or services (receiving orders) via computer networks**, it was found that, as a result of the investments in the digitalisation area, the ratio of the indicator's values to GDP rises in parallel with the increase in GDP resulting from these investments, with the highest impact on this ratio in the programming year 2026, up to 0.19%, and after the programming period, i.e. from 2031 to 2037, the average increase remains 0.07%. In the case of **gross value added J62_J63,** the ratio of the indicator values to GDP also increases in parallel with the investment-led GDP growth, with the highest impact on the ratio of the indicator values to GDP in 2026, up to 0.35%, with an average growth rate of 0.14% over the period from 2031-2037.

The impact of all MoEI-managed investments in the five domains on the key digitalisation indicators was also analysed (for the indicators "**Share of enterprises that sold goods or services (received orders) via computer networks"** and "**Gross value added J62_J63**"). It has been found that, as a result of the co-financing of EU funds, the ratio of the **share of enterprises selling goods or services (receiving orders) via computer networks to** GDP increases in parallel with the GDP growth resulting from these investments, with the largest impact on the ratio of this indicator to GDP again occurring in the year 2026 of implementation of the programme, up to 1.24% compared to the no-investment scenario, with a 0.35% average increase after the end of the programme period. For **J62_J63 gross value added**, the ratio of values is also found to increase in parallel with the investment-led GDP growth, with the highest impact also occurring in 2026, up to 2.3% compared to the no-investment scenario, with an average increase of 0.66% remaining after the programming period.

KEY EVALUATION RECOMMENDATIONS

- Other multidimensional data could be collected to measure the extent of the digital transformation: for example, it would be useful to find out the reasons for the non-use of digital technologies by the population, and it is also worth mentioning the continuation of collection of the data on indicators that are no longer being collected, or the addition of additional cross-sections.

- Use the HERLIT-16 model to evaluate the impact of digitisation investments.
- It is recommended that only investments of a sufficiently large size are modelled.
- It is proposed that the HERLIT model be used in the future to assess the impact of digitisation investments not only by MoEI, but also by other ministries, thus giving public authorities a clearer picture and allowing them to plan reforms or other initiatives in this area in a more targeted and efficient way, given that the need to participate in the transformation process and to make use of the products of digitalisation will only grow in future.

- Ensure knowledge exchange and dissemination of expertise with the Innovation Agency, which selects and monitors digitisation projects, to ensure that projects with the highest possible return on investment are selected for funding.

- It is proposed to ensure that the uptake of funds is spread as evenly as possible throughout the programming period when planning interventions.