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Evaluation of the impact of EU funds investments and other state interventions on the growth of the quality of life of the society

Summary of the final report

15 September 2020 (revision 9 November 2020)

Prepared by JSC ESTEP Vilnius under to the agreement for the provision of services No 14P-4, dated 14 January 2020, between the Ministry of Finance of the Republic of Lithuania and JSC ESTEP Vilnius, for the evaluation services of the impact of EU funds investments and other state interventions on the growth of the quality of life of the society.

THE GOAL, TASKS AND OBJECT OF THE EVALUATION

The **goal** of this evaluation was to create and use the quality of life growth model (hereinafter – GKAM), which would allow to foresee priority economic sectors (public policy areas) and their funding strategy in the short, medium and long term period, in order to achieve the desired parameters in quality of life of the society.

Tasks of the evaluation:

- 1) To create the GKAM which would allow to model the impact of public finance policy (fiscal, tax, investment, borrowing, budgeting) on the growth of quality of life in the short, medium and long term period.
- 2) To assess, using the created GKAM, the impact of state financial policy (fiscal, tax, investment, borrowing, budgeting) on the growth of quality of life (hereinafter – GKA) and propose recommendations on how to optimize public finance policy in the short, medium and long term period, to achieve the GKA.
- 3) To develop the methodology for using the GKAM.

Object of the evaluation included three interrelated elements:

- 1) The concept of quality of life in the society and its indicators.
- 2) Public finance policy interventions.
- 3) A quality of life growth model that links quality of life indicators of the society with public finance policy interventions.

METHODS OF THE EVALUATION

During the evaluation, the following main evaluation methods were applied / sources of information were used:

- 1) **Macro-econometric and microsimulation modelling made with designed GKAM.** This method was used to answer the evaluation questions related to the second evaluation task (to assess the impact of the interventions planned in the state budget for 2020 and the COVID-19 interventions to the VGKI).
- 2) **Statistical data analysis.** During the evaluation, the following statistical data were analysed: Eurostat and Statistics Lithuania data on general government expenditure and values of quality of life indicators and their changes since 2005; micro-data of the EU Statistical Survey on Income and Living Conditions (EU-SILC) (*cross version, long version and EUROMOD adapted version*).
- 3) **Regression analysis, descriptive statistics and inferential statistics.** These methods were applied for the selection of the VGKI indicators¹, determination of target values of the VGKI indicators and design of the GKAM.
- 4) **Financial data analysis.** During the evaluation, State budget accounting and payment system (VBAMS) data of 2011-2019 on state budget expenditures, according to functional and economic classifications and sources of financing, were analysed (in order to determine the share of expenditures financed by EU funds and other EU and international support funds (including investment expenditures) and to link these expenditures with the VGKI components).
- 5) **Analysis of intervention logic and contributions.** During the evaluation, the academic literature and the data of evaluations carried on in Lithuania on the links between public finance policy interventions and quality of life indicators were analysed. The results of this analysis were used to design the GKAM, for defining dependent and independent variables.

¹ At the level of each dimension of the VGKI, the interdependence of the indicators was assessed and indicators with Pearson's correlation coefficient greater / less than +/- 0.80 were omitted.

- 6) **Analysis of secondary sources.** During the evaluation, academic and applied literature was analysed, studying the concept of quality of life, indices, indicators and measurement; as well as econometric models that link quality of life indicators and public finance policy interventions; scientific articles and evaluation reports on the impact of public finance policy interventions on quality of life; documents of the European Commission, the Eurostat, the OECD and other international organizations, methodological and practical information related to the object of evaluation; forecasts of the Ministry of Finance and the Bank of Lithuania, relevant legal acts (on the state budget for 2020 and COVID-19 interventions), strategic documents (for example, the draft of the National Progress program for 2030) and other administrative information. The list of sources analysed during the evaluation consists of more than 180 items.
- 7) **Expert evaluation and discussion.** These methods complemented other evaluation methods and were applied to the selection of the most relevant indicators of the quality of life of the society, determination of the target values of the indicators and interpretation of the evaluation (modelling) results. Due to the COVID-19 pandemic during the evaluation and the quarantine, the main forum for the discussion were on-line meetings held with the contract monitoring commission, which included civil servants from various ministries and representatives of the academic community.

RESULTS AND THE MAIN CONCLUSIONS OF THE EVALUATION

The evaluation results are presented in accordance with the three elements of the evaluation object.

➤ The concept of quality of life in the society, indicators and index

During the evaluation, academic and applied literature on the concept of quality of life was analysed, as well as the Eurostat and the OECD quality of life indicators. Taking into account the literature analysed (especially J. E. Stiglitz, A. Sen and J. P. Fitoussi, 2009; Delhey, Bohnke et al., 2002; R. Veenhoven 2000, 2005, 2009, 2013; MRU, 2015) and suggested ways to assess the quality of life (objective and subjective assessment in accordance to the nature of the phenomenon and the source of the data), levels (individual and societal; macro, mezo and micro levels) and types of quality of life (potential quality of life or possibilities; real quality of life or outcome; internal and external quality of life), **the concept of quality of life of the society** was clarified. When compiling the VGKI, priority is given to *objective* indicators of quality of life, reflecting the external and internal *possibilities* at the societal level. Subjective indicators are not included in the VGKI due to lack of data and limited possibilities to assess the impact of public finance policy on these indicators with the help of the GKAM.

Based on the concept of quality of life used in the evaluation and clearly defined criteria for the selection of quality of life indicators (6 criteria in total), **a set of public quality of life indicators** was developed, covering 55 social, economic and environmental indicators divided into 10 dimensions and 19 groups of quality of life factors. The dimensions of the VGKI reflect groups of quality of life factors and specific factors. The dimensions of the VGKI are singled out on the basis of the dimensions of the Eurostat quality of life model, but supplemented by some factors relevant to the measurement of the quality of life in society, such as the macroeconomic environment, demography and migration.

Table 1. VGKI structure

VGKI dimensions	Groups of quality of life factors	Number of VGKI indicators	Number of indicators modelled
(01) Macroeconomic environment, income and consumption expenditure	Macroeconomic environment	6	6
	Income and its distribution	5	5
	Consumption expenditure	2	2
(02) Material living conditions, economic security and housing	Housing conditions	2	1
	Economic security	2	2
	Material deprivation	1	1
(03) Business innovations, employment and	Employment and unemployment	6	6

VGKI dimensions	Groups of quality of life factors	Number of VGKI indicators	Number of indicators modelled
unemployment	Employment quality	3	3
	Business innovations	4	1
(04) Demography and migration	Demography and migration	4	2
(05) Health	Lifetime	2	2
	Physical and mental health, health care	4	2
(06) Education	Education	3	1
(07) Leisure, work-life balance	Leisure	1	1
(08) Social connections, civic engagement and governance	Trust and governance quality	1	0
(09) Physical safety	Crime	2	0
	Road safety	1	1
(08) Social connections, civic engagement and governance	Environmental quality	2	1
	Use of resources	3	1

Source: ESTEP.

The lower number of indicators included in VGKI and GKAM in some dimensions is due to two main reasons. Firstly, the lack of appropriate indicators (appropriate indicators are updated annually, over time and space, e.g. between EU countries, and comparable), especially in the areas of leisure, recreation and culture as well as social relations, civic engagement and quality of governance. Secondly, the dependence of indicators on the assessed public finance policy interventions is weak (it is relevant not only in the areas of leisure, recreation and culture and social relations, civic engagement and quality of governance, but also in some other areas, such as migration, physical security and environmental quality).

With the availability of data and the increase in the number of high-quality and periodically updated indicators, new indicators may be added to VGKI and GKAM in the future. This is particularly relevant in the areas of leisure, work-life balance, quality of education, use of cultural services, social relations, civic engagement, trust and governance quality. During the evaluation, high-quality and periodically updated indicators in these areas were particularly missing. The revision of the set of the VGKI indicators may also be prompted by changing political priorities and the relevance of social, economic and environmental issues.

The list of VGKI indicators is presented in the table (see Table 2). On the basis of these indicators, **the quality of life index of the society** (hereinafter – VGKI) is calculated according to the algorithm described in Annex 6 of the final report. The VGKI is designed to summarize (aggregate) and attractively present to public information on changes in quality of life, reflected in different quality of life indicators. Given the limitations of the indices in Annex 6 of the report, the comparison of Lithuania's situation with other countries and the planning of public interventions (financial policy and others) should be based on individual VGKI indicators and (or) its cross-sections rather than on VGKI, as, at the level of the VGKI indicators, it is easier to define factors influencing changes in the indicators (intervention logic).

Table 2. VGKI indicators

VGKI dimension, QoL factor	Indicator	Desired direction of change	Primary modelling approach*
ECONOMIC DIMENSION			
(01) Macroeconomic environment, income and consumption expenditure			
Macroeconomic environment	Household and NPISH final consumption expenditure, EUR per capita	increase	macro, derivative
	Gross debt-to-income ratio of households	decrease	macro
	Government expenditure as percentage of GDP	increase	macro, derivative
	Government consolidated gross debt as percentage of GDP	decrease	macro, derivative
	Gross household saving rate	increase	macro
	Gross domestic product, EUR per capita	increase	macro, derivative
Income and its	Mean income	increase	micro

VGKI dimension, QoL factor	Indicator	Desired direction of change	Primary modelling approach*
distribution	Income quintile share ratio S80/S20 for disposable income	decrease	micro
	Gini coefficient	decrease	micro
	At-risk-of-poverty rate by age (65 years or over)	decrease	micro
	Gender pay gap	decrease	micro
Consumption expenditure	Final consumption expenditure of households by consumption purpose: food and non-alcoholic beverages	decrease	macro
	Final consumption expenditure of households by consumption purpose: housing, water, electricity, gas and other fuels	decrease	macro
(02) Material living conditions, economic security and housing			
Housing conditions	Total population living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames or floor	decrease	
	Inability to keep home adequately warm, percentage	decrease	micro
Economic security	Inability to face unexpected financial expenses, percentage	decrease	micro
	Arrears (mortgage or rent, utility bills or hire purchase)	decrease	micro
Material deprivation	Severe material deprivation rate	decrease	micro
(03) Business innovations, employment and unemployment			
Employment and unemployment	Employment rate population aged 20-64	increase	macro
	Unemployment rate	decrease	macro
	Long-term unemployment, population aged 20-64	decrease	macro
	People living in households with very low work intensity	decrease	macro
	Inactive population as a percentage of the total population aged 20 to 64	decrease	macro
	Self-employment as percentage of total employed population aged 20-64	increase	macro
Employment quality	Monthly gross average earnings	increase	macro
	Percentage of part-time employment of total employment	decrease	micro
	Percentage of temporary contracts of total employment	decrease	micro
Business innovations	R&D expenditure as percentage of GDP	increase	macro
	R&D expenditure by business enterprise sector as percentage of GDP	increase	
	Patent applications to the EPO per million inhabitants	increase	
	Employment in knowledge-intensive activities as percentage of total employment	increase	
SOCIAL DIMENSION			
(04) Demography and migration			
Demography and migration	Crude rate of natural change of population	increase	macro
	Fertility rate	increase	macro
	Population	increase	
	Age dependency ratio (population aged 0-19 and 65 and more to population aged 20-64)	decrease	
	Crude rate of net migration plus statistical adjustment	increase	
(05) Health			
Lifetime	Life expectancy	increase	macro
	Healthy life years in absolute value at birth	increase	macro
Physical and mental health, health care	Treatable and preventable mortality	decrease	
	Standardised death rate: intentional self-harm	decrease	
	People having a long-standing illness or health problem	decrease	micro
	Self-perceived long-standing limitations (some or severe) in usual activities due to health problem	decrease	micro
(06) Education			
Education	Population with tertiary education (levels 5-8)	increase	macro
	Participation rate in education and training (last 4 weeks), as percentage of population aged 25 to 64	increase	
	Pupils aged between 3 years old and the starting age of compulsory education at primary level	increase	
(07) Leisure, work-life balance			
Leisure	Final consumption expenditure of households by consumption purpose: recreation and culture	increase	macro
(08) Social connections, civic engagement and governance			
Trust and governance	Trust in national government	increase	

VGKI dimension, QoL factor	Indicator	Desired direction of change	Primary modelling approach*
quality			
(09) Physical safety			
Crime	Recorded offences by offence category: intentional homicide, per hundred thousand inhabitants	decrease	
	Crime, violence or vandalism in the area	decrease	
Road safety	Standardised death rate: transport accidents	decrease	macro
ENVIRONMENT DIMENSION			
(10) Environmental quality and resources efficiency			
Environmental quality	Air emissions: particulates < 2.5µm, kg per capita	decrease	
	Pollution, grime or other environmental problems	decrease	macro
Use of resources	Greenhouse gas emissions, tonnes per million GDP	decrease	macro
	Municipal waste by waste management operation: disposal (landfill and other)	decrease	
	Municipal waste by waste management operations: recycling (material, composting and digestion)	increase	

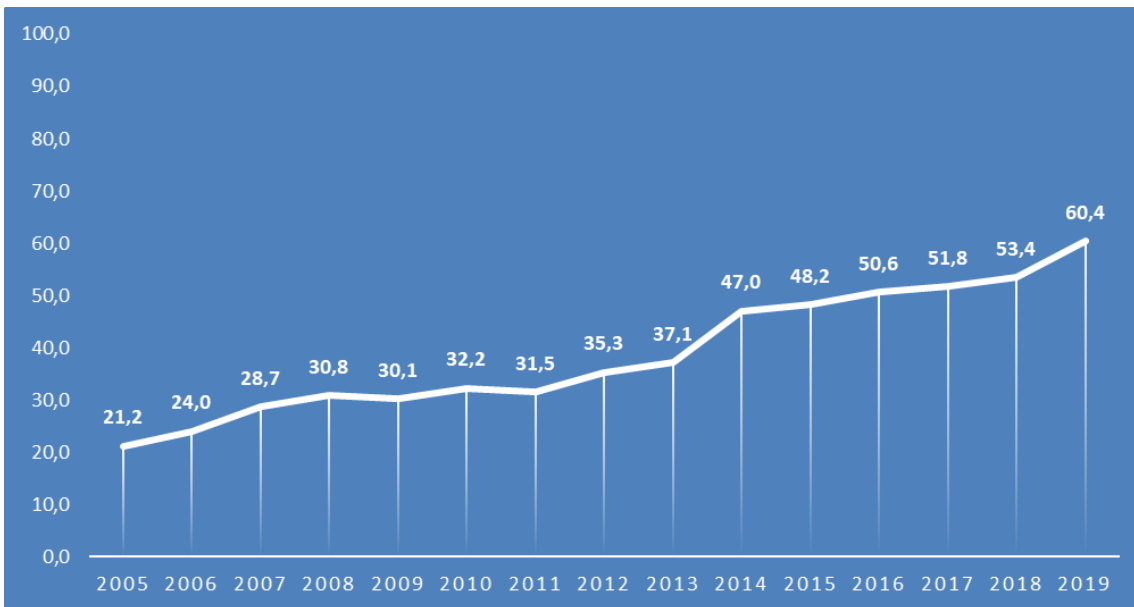
*If the indicator is derivative, it means that its value is calculated from other values of the macro model variables (endogenous and exogenous).

Source: ESTEP.

The VGKI, compiled during the evaluation, differs from other indices used up to now in Lithuania (and, according to evaluation experts – internationally too), mainly because of the fact that standardization of the values of the VGKI include not only the actual but also the **target values of the VGKI indicators**. The target values for the VGKI indicators are set up according to the draft of the National Progress Programme for 2030, the current situation or the EU average. The inclusion of target values in the rationing algorithm better reflects the current situation and the gap from the desired parameters of quality of life in the society.

During the evaluation, the values of the VGKI and individual values of the VGKI dimension indices for 2005-2019 were calculated, and the forecast of VGKI for 2020-2025 was presented. The analysis of the VGKI values for 2005-2019 have revealed (see Picture 1) that the quality of life has increased significantly since 2005 (from 21.2 in 2005 to 60.4 in 2019). The biggest jump in quality of life occurred in 2014 (the value of VGKI increased by almost 10 points from 37.1 to 47). Significant improvement is also seen in 2019 (from 53.4 to 60.4). Despite this growth, it only makes 60 percent of the VGKI. The largest lags from the desirable quality of life parameters are in the health dimension (index value in 2014 is 43.6), the macroeconomic environment, income and consumption expenditure dimension (index value in 2019 is 45.9) and the demography and migration dimension (index value in 2019 is 51.0) – for more details please see section 7.2.1 of the final report).

Picture 1. VGKI dynamics in 2005-2019



Source: ESTEP.

With better availability of data and the increase in the number of high-quality indicators which are periodically updated, there could be a need to add new indicators to the VGKI and the GKAM in the future. This is particularly relevant in the areas of leisure, work-life balance, quality of education, use of cultural services, social relations, civic engagement, trust and quality of governance. During the evaluation, there was a particular lack of high-quality data and periodically updated indicators in these areas. The revision of the VGKI set of indicators may also be prompted by changing political priorities and the relevance of social, economic and environmental issues.

➤ Quality of life growth model (GKAM)

During the analysis of the experience of other EU and the OECD countries in modelling the growth of quality of life, econometric models that include all relevant public finance policy interventions and different indicators of the quality of life of the society were not found. Many of the econometric models developed cover only certain interventions or only certain indicators and are therefore not suitable for the goal and tasks of the evaluation. Combined microsimulation and macro econometric models allowing to assess the direct impact of interventions on macroeconomic indicators and income distribution, as well as indirect (secondary) changes in allocation effects were considered as most suitable for evaluation goal. This is an innovative approach both in Lithuania and internationally.

Taking into account the limited resources provided for the evaluation and the need to ensure the reliability of the evaluation results, the GKAM was constructed on the basis of existing models (dynamic macro econometric model of the Lithuanian economy and microsimulation model EUROMOD). The GKAM constructed during this assessment is a combined (macro econometric and microsimulation) dynamic model that allows to assess (ex-post) and forecast (ex-ante) the impact of different public finance policy interventions on the VGKI and on individual VGKI indicators in the short term (1-2 years), medium term (3-4 years) and in the long term (5-7 years) period. The GKAM consists of the theoretical part described in Part 6 of the final report, and a modelling tool developed using the open source R program. **The GKAM includes two blocks:**

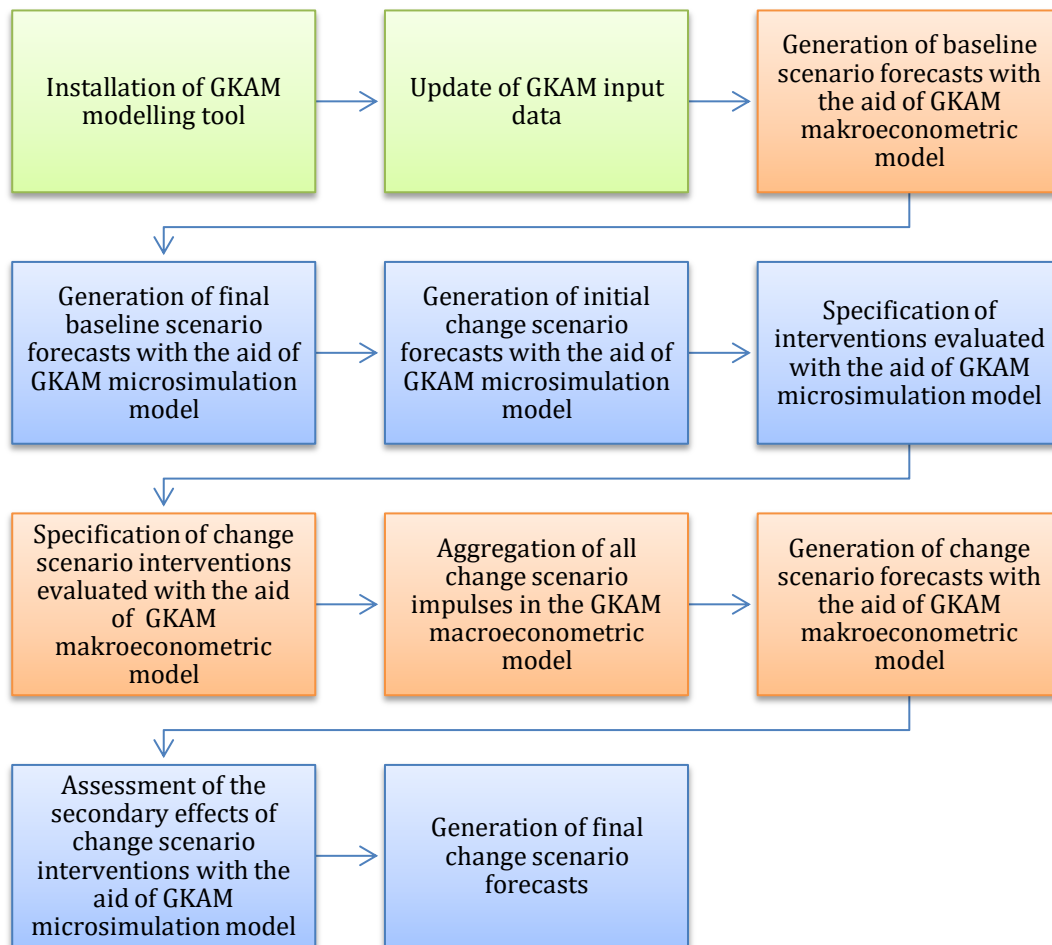
- 1) The GKAM macro econometric model able to describe the main country economy's processes in goods, services and labour markets and to assess the impact of interventions on the main macroeconomic indicators and on part of the VGKI indicators (25 VGKI indicators in total).
- 2) The GKAM microsimulation model able to assess the impact of interventions on household's disposable income and on part of other VGKI indicators (13 VGKI indicators in total). The GKAM microsimulation model includes EUROMOD, modification of micro-data (specifically

EU-SILC) and the connection between the GKAM micro- and macro-blocks and calculation of the VGKI indicators from the modified micro-data.

With the help of the GKAM, 38 VGKI indicators can be modelled. Eurostat projections are used to determine future values of 2 more VGKI indicators (population and demographic balance). The remaining VGKI indicators cannot be modelled due to lack of data (short time series), low or unclear dependence on public finance policy interventions and (or) limited possibilities of the GKAM (to forecast some VGKI indicators, complex sectoral models shall be developed and (or) GKAM shall be supplemented with other external blocks, as the GKAM now is supplemented with the EUROMOD). As data availability improves, in the future the GKAM can be revised and expanded by refining existing model equations and by adding new equations or external blocks to the model.

The GKAM operation model is presented in the picture below (Picture 2). The operations performed in the GKAM macro econometric model are marked in orange; the operations performed in the GKAM microsimulation model are marked in blue; the operations covering both parts of the model are marked in green.

Picture 2. GKAM operation scheme



Source: ESTEP.

➤ **The impact of assessed public finance policy interventions**

The GKAM, designed during the evaluation, provides the possibility to assess **the impact of the following types of public finance policy interventions on VGKI and its indicators:**

- 1) changes in the size and structure of general government expenditure, in terms of functional and economic classifications;
- 2) changes in the amount of general government revenue;
- 3) changes in investments (including investments from EU funds and other investments financed from EU and international support funds);
- 4) changes in government debt;
- 5) changes in direct taxes and some other taxes on residents;
- 6) changes in social benefits.

The evaluation estimated the impact of the planned public finance policy interventions for 2020 and the impact of **COVID-19 interventions** on the VGKI. COVID-19 interventions are measures planned in two documents adopted by the Government:

- The plan of measures to stimulate the economy and reduce the consequences of coronavirus (COVID-19), and
- The DNA plan for the future economy (some measures overlap).

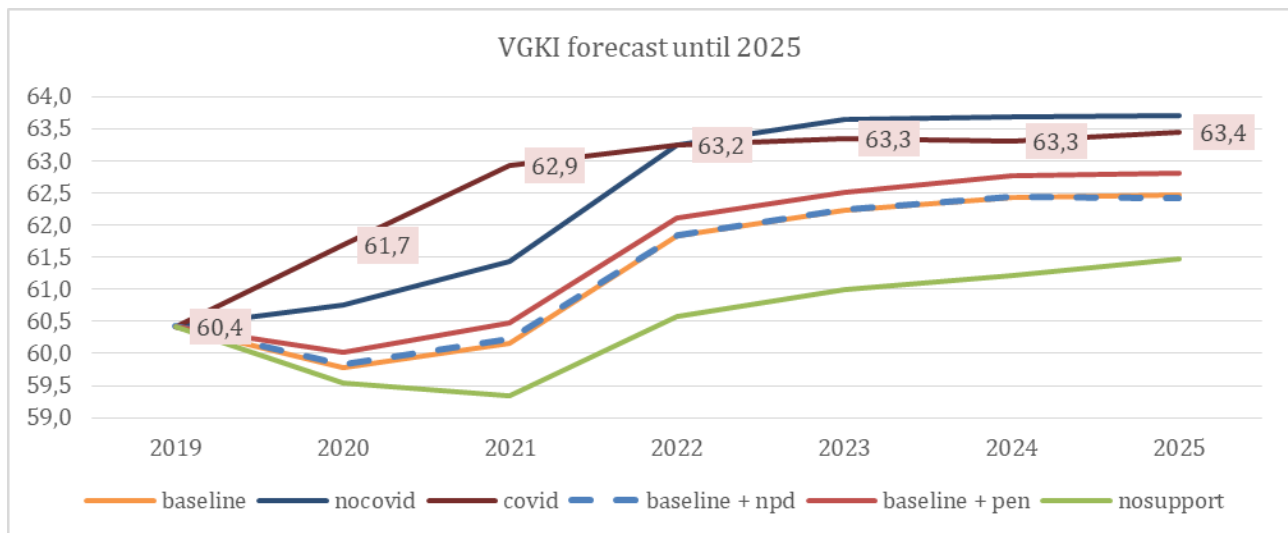
In order to answer the evaluation questions and to take into account the additional need to assess the impact of COVID-19 interventions, several **change scenarios** were analysed during the evaluation:

- 1) The main change scenario “COVID”, covering budgeted interventions for 2020 and COVID-19 interventions.
- 2) The main change scenario “noCOVID”, covering budgeted interventions for 2020, but excluding COVID-19 interventions.
- 3) The main scenario “nosupport”, covering budgeted interventions for 2019, but excluding interventions financed by EU support.
- 4) The additional change scenario “NPD”, covering a permanent increase of NPD made with budgeted interventions in 2020 and additional temporary increase of NPD.
- 5) The additional change scenario “PEN”, covering the increase of pensions made while implementing the budget for 2020.

The GKAM estimated that effects of different scenarios (the difference between the change scenario and the baseline scenario² on the VGKI and the values of the VGKI indicators) differ in the short, medium and long term period and may even be the opposite, so it makes sense when optimising interventions to look at the short and long term values of VGKI, as well as cumulative impact and cumulative level of quality of life.

The results of the impact assessment of the “COVID” and “noCOVID” scenarios obtained with the help of GKAM show that in 2020-2025 the implementation of the COVID scenario will increase the VGKI by 9 points and the implementation of the “noCOVID” scenario by 7.5 points, meaning that the implementation of the “COVID” scenario during the assessment period has the largest overall impact on quality of life. By comparison, the EU and other international support (EUR 4.5 billion in total) in 2020-2025 will increase the VGKI by 5.8 points. Most COVID interventions have a significant but short-term impact, therefore the level of quality of life would be highest in the “noCOVID” scenario.

Picture 3. Comparison of predicted VGKI values for 2020-2025 in analysed scenario



Source: ESTEP.

It is projected that, following the implementation of all COVID-19 interventions, the value of VGKI should reach 61.7 in 2020 and 63.4 in 2025. Summarized information about the impact of the state budget for 2020 interventions and COVID interventions on changes in the values of quality of life indices in the short term is presented in the table (see Table 3).

² During the evaluation, budgeted interventions of 2019 and development of economic indicators affected by the COVID-19 pandemic was considered as the baseline scenario.

Table 3. Short term impact of COVID-19 interventions and budgeted interventions for 2020 on quality of life

	Change, compared to the baseline scenario	Year 2020	Contribution to change, %	
	Scenario "COVID"	Scenario "no COVID"	COVID interventions	State budget for 2020 interventions
			COVID interventions only	
Quality of life index of the society (VGKI)	1.9	1.0	0.9	48%
(01) Macroeconomic environment, income and consumption expenditure	6.0	5.1	0.9	16%
(02) Material living conditions, economic security and housing	1.0	0.2	0.7	75%
(03) Business innovations, employment and unemployment	1.8	0.7	1.1	61%
(04) Demography and migration	5.5	1.7	3.7	68%
(05) Health	7.5	3.0	4.5	60%
(07) Leisure, work-life balance	0.6	0.0	0.6	100%
(08) Social connections, civic engagement and governance	1.4	0.3	1.1	80%
(08) Social connections, civic engagement and governance	0.0	0.0	0.0	-
(09) Physical safety	0.0	0.0	0.0	-
(10) Environmental quality and resource efficiency	-4.7	-1.2	-3.5	75%

Source: ESTEP.

In the short-term period, the highest value of the VGKI is reached in the case of the „COVID“ scenario, and in the long-term period, the slightly higher value of the VGKI is achieved in the case of the „noCOVID“ scenario. In the short-term period, COVID interventions and the state budget for 2020 interventions will most positively contribute to changes in the indices for the macroeconomic environment, income and consumption expenditure, demography and migration, health and physical security (only from 2021), but will negatively affect the environmental quality and the use of resource dimension index. In short-term period, among the dimensions which are most significantly impacted by interventions, COVID interventions will make a greater contribution to changes in the indices for the dimensions of demography and migration, health and physical security (only from 2021), and state budget interventions will mostly impact changes in the index of the macroeconomic environment, income and consumption expenditure dimension. **COVID interventions will mitigate the decline of GDP and of private consumption and the rise of unemployment level, and the state budget for 2020 interventions will make a significant contribution to the improvement of revenue and distribution indicator.** However, with regard to the impact of COVID interventions on demographic and health indicators (in particular, on case fatality rate and mortality rate, on which the overall natural population change rate and some other indicators of these GKI dimensions depend), it should be noted that GKAM does not take into account the impact of the COVID-19 pandemic on health, so the real impact of COVID interventions on the indices of these dimensions may be smaller.

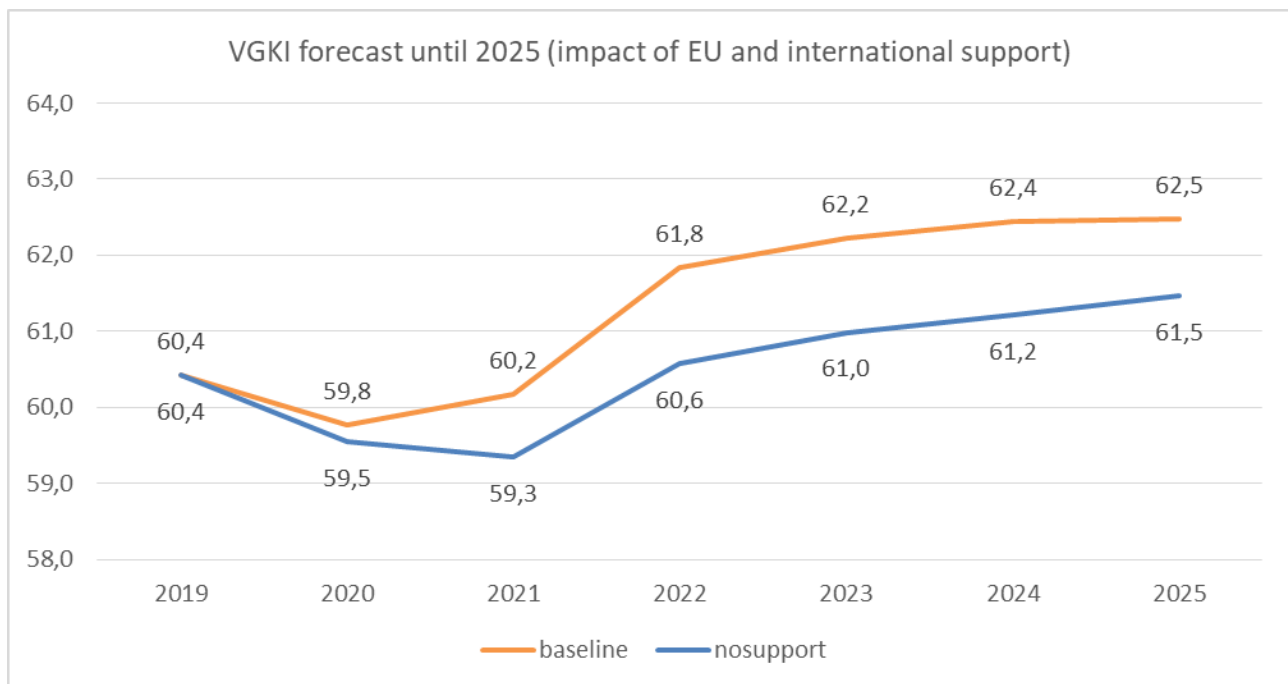
The assessment of the total impact of EU and other international support (including investments from EU funds) shows that without support the total quality of life level in 2020-2025 would be by 5.8 points lower than the projected total value of VGKI, and the quality of life level (value of VGKI) in 2025 would be by 1 point lower.

At the level of the GKI dimensions, without the EU and other international support, the total values of the GKI dimension indices in 2020-2025 would be smaller in 5 of the 9 dimensions.³

³ With the exception of the dimensions "Demography and migration", "Education" and "Physical security", which would have lower index values, and the dimension "Leisure, work-life balance", for which interventions would work in the short and medium but not long term. Indicators of one dimension "Social relations, citizenship and quality of governance" are not modelled with the help of GKAM.

EU investments and other international support have the greatest positive impact on material living conditions, economic security and housing as well as business innovations, employment and unemployment dimensions because of positive impact on salaries, and employment indicators. In the period of 2020-2025, around EUR 4.5 billion of EU and other international support will be paid out to various projects EU. It is projected that the biggest part of the support will be injected into the economy through material investments from the public and private sectors. Rising investment and wage growth are the main contributors to the rising quality of life, and it indirectly boosts domestic consumption and higher employment.

Picture 4. Impact of EU funds investment and other EU and international support on VGKI



Source: ESTEP.

Without EU and international support, in 2023, average gross monthly earnings would be 146 Eur lower than projected with support. However, in 2023, wage growth will increase income inequality. The value of the Gini coefficient will be 0.81 points higher, to compare to the baseline scenario. When summing up the impact, it is estimated that, because of the EU and international support for the period of 2020-2025, the average monthly gross salary (hereinafter – VMBDU) will be EUR 666 higher, But this will increase the Gini coefficient by 3.77 percent point. Because of the EU and international support for the period of 2020-2025, VMBDU is by 8 percent higher than in the baseline scenario, and the Gini coefficient is 2 percent higher than it would be without the support.

The overall impact of the EU and international support on VGKI is slightly lower compared to the impact of COVID interventions and to the impact of state budget for 2020 interventions. But, unlike to latter interventions, the EU and international support will make a significant contribution to the improvement material living conditions, in particular through high positive effects on wages. However, this effect is not differentiated and therefore has a negative effect on income distribution. In general, the EU and international support have a greater impact on the economic dimensions of VGKI and those VGKI indicators that are investment-dependent, but they have lower impact on other areas of quality of life, compared to COVID interventions and the state budget for 2020 interventions.

The value of the quality of life index in 2020 does not fully reflect the impact of the COVID-19 pandemic on quality of life. The impact of the pandemic on the health dimension index was not taken into account in the GKAM, but the impact on economic indicators such as GDP, employment rate, income, etc. was assessed. The impact of the COVID-19 crisis on economic indicators was determined in accordance with the Bank of Lithuania's Lithuanian economic forecast for March 2020. During the

assessment, it was considered that, in the absence of interventions, Lithuania's economic indicators would be in line with the above projections (they are considered as a baseline scenario). With the help of GKAM, it was found that in such context, of all five change scenarios analysed, the COVID scenario would provide the largest total increase in quality of life in the short-term (one year after interventions) and long-term (five years after interventions) periods.

The GKAM results show that the additional change scenario "NPD" does not have a significant effect on the GKI values (the short-term and total long-term effect of increase the NPD on the GKI is close to 0). An analysis of the impact of NPD increasing measures at the GKI dimension level shows that these measures have a positive impact on the macroeconomic environment, income and consumption expenditure, material living conditions, economic security and housing, as well as on the environmental quality and the use of resource, but have a negative impact on other GKI dimensions. The analysis shows that increase of the NPD contributes most positively to reducing of income inequality and changes in the structure of household consumption expenditure, but has a negative impact on the poverty rate of older people.

The effect of the additional change scenario "PEN" on GKI values, in contrast to the NPD scenario, is positive and significant. An analysis of the impact of pension increasing measures at the level of the GKI dimensions shows that these measures had a positive impact on all dimensions of the GKI, with the exception of the dimensions of physical security and environmental quality and use of resources. Compared to the baseline scenario, these measures will have the most positive impact on three indicators: reducing income inequality in terms of the S80 / S20 income distribution coefficient and the Gini coefficient, and reducing poverty risk level in the group of 65 years old and older people. These results suggest that, when optimizing public finance policy interventions, it makes sense to apply measures similar to pensions' increase, in order to improve the quality of life of society. For 2020, according to the scenarios analysed, the pension increase measure is more targeted and effective measure to reduce income inequality and poverty, compared to the NPD measure.

Part 8 of the final report describes in detail the results of the impact assessment of the different scenarios, when analysing the impact on the VGKI, on the indices of the VGKI dimension indices and on the individual VGKI indicators.

BENEFITS OF EVALUATION RESULTS

The evaluation has developed a specific practical tool, the Econometric Modelling Tool (GKAM), which will allow the Ministry of Finance to assess the impact of planned or implemented public finance policy interventions on various indicators (not only key macroeconomic indicators such as GDP or employment, but also other indicators reflecting the quality of life). Using the set of VGKI indicators developed during the evaluation and taking into account the target values of the VGKI indicators determined during the evaluation (preferred quality of life parameters), the Ministry of Finance will be able to analyse not only forecasted but also actual values of the VGKI indicators and to use the results of this analysis when negotiating the state budget and intervention planning in the areas under governance of other ministries.

RECOMMENDATIONS OF THE EVALUATION

The evaluation provided strategic suggestions and recommendations on:

- 1) The use of the GKAM and combination of the GKAM with other evidence-based governance tools (including the assessment of the impact of other interventions not only finance policy interventions on the VGKI indicators);
- 2) The use of the VGKI indicators (including monitoring of actual values and designation of ministries responsible for specific indicators) and the update of the set of the VGKI indicators, taking into account the level of achievement and relevance of the VGKI indicators;
- 3) Assessment of different types on scenarios and intervention optimising;

- 4) Improvement of the GKAM (including the update of the equations of the model or adding additional equations to it; supplementing the model with other external blocks; suggesting solutions to solve the problem of micro-data delay).