

SCOS INDEXATION METHODS. THEORY AND PRACTICE

European Social Fund Agency

The Methodological Support Division of European Social Fund Agency collected theoretical aspects and practical examples on simplified cost options (hereinafter – SCOs) adjustment methods and prepared the short Guidelines "SCOs indexation methods. Theory and practice ".

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CONTENT

THEORETICAL ASPECTS OF SCOs INDEXING	4
PRACTICAL EXAMPLES ON SCOs INDEXATION	6
INDEXATION OF SCOs IN PROJECTS AT NATIONAL LEVEL	12

THEORETICAL ASPECTS OF SCOs INDEXING

Common Provisions Regulation (hereinafter – CPR)¹ does not include any provision on the adjustment of simplified cost options. Therefore, adjustment is not compulsory. However, it is recommended that the managing authority adjusts the simplified cost options (hereinafter SCOs) when launching a new call for proposals or does so periodically in order to take account of an indexation or economic changes, e.g. in energy costs, levels of salaries, etc. The Commission suggests enshrining in the methodology some automatic adaptations, for instance, based on inflation or evolution of salaries. Thus, the simplified cost option remains a reliable proxy of real costs (Guidance on Simplified Cost Options (SCOs): Flat rate financing, Standard scales of unit costs, Lump sums²).

Indexation³ is defined as the automatic adjustment of wages, taxes, pension benefits, interest rates, etc., according to changes in the cost of living or another economic indicator, especially to compensate for inflation. Adjustment may be applied to update costs from previous years to current prices.

Indexation a given price or payment to other prices can serve two main purposes:

- to maintain a stable relative price between two or more goods or services;
- to maintain a stable real price of a good or service relative to the purchasing power of a currency unit.

The primary reason why indexation is beneficial is to offset inflation and the main purpose of the indexation or adjustment of SCOs – is to have the best possible approximation. Indexation can be classified in different ways.

Firstly, indexation can be classified by the types of expenditures to three categories:

- *Wage indexation*. Formal wage indexation can be defined as the presence of clauses in laws or contracts whereby wages (either public or private) are to a large degree automatically linked to price developments.
- **Price indexation** is used for inflation compensation. Price adjustment addresses problems and can protect from high price fluctuations. Price adjustment allows to offer more realistic prices.
- *Mixed price / wage indexation* could be used for different categories of costs indexation.

Also, it can be distinguished several types of indexation:

- Historical indexes;
- Regular, not specified indexation (ex., according to conditions of Legal acts);
- Forecast indexes.

The traditional ones most often used types for SCOs indexation – historical indexes and regular not specified indexation. One method that is not used very widely for SCO indexation – forecast indexes. There is no single adjustment formula that encompasses every situation. Different formulas and methods can be applied for SCO indexation. The choice of index will depend on what is being measured. The cost of labour, for instance, may be affected by various factors including, but not limited to, general inflation in the country and exchange rate fluctuation.

¹ Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy (Article 53 and Article 94).

² Source: <u>https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021XC0527(02)</u>

³ Source: <u>https://www.dictionary.com/browse/indexation</u>

Indexes are used to show increases in any of these elements that affect the price of the identified component. Potential indexes include:

- Local price indexes, applicable according to costs covered by SCO, such as retail price index, consumer price index, minimum wages, or labor rates, regulated prices, etc., provided by, for example, the country statistics office.
- International indexes, sourced from reputable organizations and widely used by the business community. The sources of indexes must also be related to the source of foreign inputs and currencies of payment.
- Comparable indexes, where acceptable local or international indexes are difficult to find, indexes of similar commodities used internationally or those from neighbouring.

Different indexation methods are used for SCOs adjustment. It depends on what costs are covered by the SCO. In order to more precisely describe the methods that are used for SCO adjustment, some practices were collected about the adjustment methods and ways that are used in practice for different SCOs adjustment. After analysing the examples of countries, the most often used tools for indexation were divided to four categories (see Table 1).

Changes of national Changes in EU Publication of new Indexes legislation legislation statistical data Consumer price index Minimum wage growth Changes in Erasmus+ Public expenditure on (CPI) for specific • Amount of the basic Program Guide education per social allowance country Changes in Delegated pupil/student based on Harmonized consumer · Basic amount of Regulation FTE by education level price index (HCPI) and program official salary Inflation rate, Changes in the legal orientation OECD Total CPI index acts regulating the Fuel prices • Labour cost index (LCI) employer's taxes • Average monthly Monthly wage index (social insurance salary in particular Construction cost contributions) sector index Changes in the legal acts, where set amounts of accommodation and subsistence allowances · Changes of VAT rate

Table 1. Indexation tools for SCOs adjustment

Source: prepared by Simplified Measures Center.

PRACTICAL EXAMPLES ON SCOs INDEXATION

It can be excluded four most often used indexation methods, three of them – based on historical index evaluation and one – based on changes in national and European Union legislation:

- Wage cost indexation (see Table 2);
- Price indexation (see Table 3);
- Mixed price / wage (see Table 4);
- Regular, not specified indexation (see Table 5).

Table 2. Practical examples of usage Wage cost indexation

What categories of costs are covered by SCO	Indexation method	
Wage costs	Based on the data of the average gross salary of workers in the social sector for the period 3Q(N-1) to 2Q(N).	Once a year.
	Automatic adjustment by 2.4 % every 12 months. The percentage is based on the average increase in salaries according to official national statistics for the past five years.	Every 12 months.
	The Unit Costs for Direct Personnel Costs may be updated annually by the GEP, based on new statistical data from the Personnel Tables and the Earnings Structure Survey, referring to years after 2020.	
	Adjustment using monthly wage (gross) index, compared to previous year.	Every year once a year until the end of Q2.

Table 3. Practical examples of usage Price indexation methods

What categories of costs are covered by SCO	Indexation method	Periodicity
Equipment costs, costs of different goods or services	SCOs are adjusted according to the (public) information on the Consumer Price Index (CPI) provided by the Statistics, compared to previous years (according to the COICOP classification selected specific category, for example, 5.3. "Household appliances, or general category 00 "Consumer goods and services").	Once a year until the end of I quarter of year N.
	The SCOs will be adjusted according to the GDP deflator. Information on the GDP deflator is published by Eurostat, the statistical office of the European Union (Eurostat).	Adjustment may be applied once a year until the end of the quarter selected in year N.

Tuition and bench fees for study programmes	The SCOs will be adjusted in line with the cost of inflation at a national level. The rates of inflation are published by the National Statistics Office on an annual basis.	Adjustment may be applied every year to new calls for applications once a new rate is published by the National Statistics Office. Such calls will include the relevant rates applicable.
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Table 4. Practical examples of usage Mixed price / wage indexation

What categories of costs are covered by SCO	Indexation method	Periodicity
P1 component of SCO, covering average exhibition space rental, exhibition registration fee, exhibition stand installation costs;	P1 component will be updated by indexing the total costs of each exhibition to the price level of the corresponding year, based on the OECD Total CPI index, which covers all countries.	Once a year
P2 component of SCOs, covering average wage costs, including costs for employer-employee obligations;	P2 component will be updated based on the data of the average monthly wage of the corresponding year of the Official Statistics Portal of the Private Sector with Individual Enterprises and assessing changes in legislation governing employer taxes.	
P3 component of SCO , covering average travel and living expenses of one participant (which consists of travel expenses, living space rental expenses and daily allowance expenses).	P3 component will be updated after the changes of the Erasmus+ Program Guide and the Resolution No. 526 of Government of the Republic of Lithuania "On the payment of per diems and other expenses of official business trips".	

What categories of costs are covered by SCO	Indexation method	Periodicity
Wage costs	Unit cost is adjusted if the amount of minimal monthly salary in Lithuania changes.	Changed after changes in legislation not later than one month after the change in the legal act.
Internship scholarship costs	Is recalculated every time there is a change in the amount of the internship scholarship established in the Employment Law and the amount of the minimum monthly salary established in Lithuania.	Changed after changes of legal acts not later than one month after the change in the legal act.
Travel costs excluding hospitality and per diem	Rates may be adjusted in line with any adjustments published in the latest available version of the ERASMUS+ Program Guide.	Frequency of adjustment and related adjustment trigger is subject to any circumstances or factors taken into consideration by the European Commission at the time.
Services costs	The unit costs are adjusted assessing the changed Value added tax (VAT) rate established in the VAT Law.	Changed after changes of legal acts not later than one month after the change in the legal act.
Salary costs for annual leave for project staff, calculated based on the eligible and actual salary costs of the project staff	The amounts of the flat rates are updated only when the legal acts regulating the procedure for granting and / or calculating annual leave are changed.	Changed after changes of legal acts not later than one month after the change in the legal act.

Table 5. Practical examples of usage Regular, not specified indexation methods

According to all previously mentioned methods, SCOs are indexed to the current year. This means that the SCOs are recalculated to the N-1 price level, as the indices for the current year (N) are not yet published. Therefore, SCO is always one year behind the real price level in the country. These methods of adjusting the SCOs are appropriate in a stable economic situation, in years of economic growth which is characterized by a growing gross domestic product (GDP), a decreasing unemployment rate, and a low inflation.

When the inflation rates are growing up, such previously mentioned methods used for SCO indexation don't correspond to real market prices, which are also growing up very fast and, in such cases, there is a very high risk that the activities will not be successfully implemented. In the economic recession phase the macroeconomic projections and forecast indexations could be used for data recalculation to the current year price level.

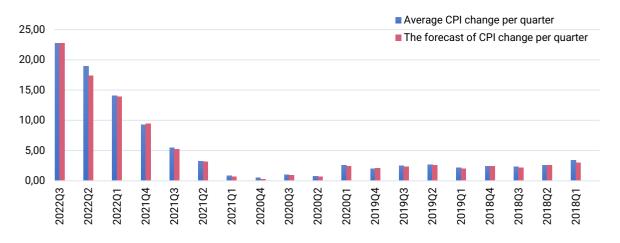
Macroeconomic projections aim to predict and understand the future state of the economy on a broad scale. They include information related to economic growth, inflation, wages, unemployment, and trade. For example, Euro system and European central bank (ECB) staff produce macroeconomic projections that cover the outlook for the euro area and the wider global economy. These contribute to the ECB Governing Council's assessment of economic developments and risks to price stability. Forecasts of macroeconomic indicators are prepared based on the information from the international environment and other reliable data. The calculations are made considering different indicators and economic cyclicity. For example, Organisation for Economic Co-operation and Development (OECD) performing forecasts combine expert judgement with a variety of existing and new information relevant to current and prospective developments. The Bank of Lithuania also use different methods for calculating forecasted indicators. These include revised policy settings, recent statistical outturns and conjunctural indicators, combined with analyses based on specific economic and statistical models and analytical techniques. So, the methods used to calculate forecasted rates have strong scientific basis and methodology.

For the indexation of SCOs in the most cases the inflation forecast, or wage growth forecast can be used:

• Inflation forecast is measured in terms of the consumer price index (CPI) or harmonised index of consumer prices (HICP) for euro area countries, the euro area aggregate and the United Kingdom. Inflation measures the general evolution of prices. It is defined as the change in the prices of a basket of goods and services that are typically purchased by households. Projections are based on an assessment of the economic climate in individual countries and the world economy, using a combination of model-based analyses and expert judgement. The indicator is expressed in annual growth rates⁴.

• Wage growth forecast is measured in terms of employment rates and gross domestic product growth. Also, the wage growth is affected by minimal monthly wage growth in the country and many other macroeconomic indicators.

To justify this method, there was carried out the analysis of the differences between actual Consumer price index and forecasted Consumer price index in Lithuania. The analyzed period – 2018 Q1–2022 Q3. Analysis shown that only two times the forecast exceeds the actual inflation rate, it was 2019 Q4 and 2021 Q4, other times actual inflation rate exceeds forecast of consumer price index (see Fig. 1).





Source: data.oecd.org/price/inflation-forecast.htm and osp.stat.gov.lt/statistiniu-rodikliu-analize#/

For the determination of the SCOs using actual indices, the adjustment of the SCOs for subsequent periods is still made using actual indices. In contrast, for the determination of the SCOs using prognostic indices, the adjustment of the SCOs for subsequent periods is made by combining prognostic and actual indices. However, the principles for the recalculation of the SCOs determined in both ways remain identical, although different indexation indices are used in each case. The principles for adjusting the SCOs in these two different ways are presented in Tables 6 and 7. A comparison shows the similarity of the adjustment principles and the differences in the applicability of the indices used.

⁴ Source: <u>https://www.oecd-ilibrary.org/economics/inflation-forecast/indicator/english_598f4aa4-en</u>

Year	SCOs setting stage	1 st adjustment	2 nd adjustment
2016 2017 2018 2019 2020 2021 2022	The historical data used in the survey are converted into actual indices to the published actual price level for the most recent year. A methodology has been developed with SCOs values calculated to the 2021 price	The calculated SCOs are adjusted to the published actual price level for the most recent year.	The calculated SCOs are adjusted to the published actual price level for the most recent year.
2023	level.	SCOs converted to 2022 price level.	SCOs converted to 2023

Table 6. Principles for setting and adjusting the SCOs using the actual CPI

Table 7. Principles for setting and adjusting the SCOs using the prognostic CPI

Year	SCOs setting stage	1 st adjustment	2 nd adjustment
2016 2017 2018 2019 2020 2021	The historical data used in the survey are converted into actual indices to the published actual price level for the most recent year.	The calculated SCOs are adjusted to the published actual price level for the most recent	The calculated SCOs are adjusted to the published actual price level for the most recent year.
2022	A methodology has been developed with SCOs values calculated to the 2022 price level using the prognostic 2022 CPI index.	year.	
2023		Recalculated SCOs using the prognostic CPI for 2023.	
2024			Recalculated SCOs using the prognostic CPI for 2024.

For example, the data of 2016 is used for SCO calculation. For the adjustment the data to 2021 price level, the actual CPI are used, and the data is recalculated to 2021 years level. In 2022 years by indexing the amounts to 2022 price level, the inflation forecast for 2022 is used. In the 1st amendment of SCOs, in 2023, the amounts will be adjusted to 2023 price level, that is the inflation forecast ratio of 2022 will be changed to the actual change in consumer prices of 2022 and then the SCO will be indexed based on the 2023 forecast again. And the same exercise will be performed every year for adjusting SCO in the future. The example of usage forecasted CPI is provided in Table 7.

Table 8. The example of usage prognostic CPI

What categories of costs are covered by SCO	Indexation method	Periodicity
Acquisition and installation (or replacement) costs of a hot water meter with remote data reading function.	 SCOs are updated under the conditions listed below: In 2023 recalculating amounts: The recalculation of 2021 years data indexation is performed, replacing OECD inflation forecast of 2022 in actual 2022 by the change in consumer prices, calculated according to the consumer price index, compared to the corresponding period of the previous year (according to the COICOP classifier "00 Consumer goods and services"), in this way the 2022 level data calculated based on the actual change in the CPI; then data of 2022 level are indexed to the 2023 price level based on the data of the inflation forecast published by the OECD for the current year (in this case, 2023). The same sequence is maintained when recalculating SCOs in subsequent years as well. 	SCOs are updated every year, once a year until the end of I quarter

This forecasted indexation method is the most suitable and useful when there is high inflation in the specific country or in the European Union to calculate the SCO average corresponding to the current price level.

Practical suggestions:

- 1. Different indices and different indexing methods can be selected for SCO adjustment.
- Indexes must be suitable for indexed costs, i.e., the index must correspond to the type of expenditures covered by SCO. If SCO covers wage costs, the index should measure wages changes – it can be used labour cost index.
- 3. When choosing indices, it is important to pay attention to the base year of index calculation, i.e., for consumer price index base year is 2015.
- 4. Some indices are presented as percentage changes over the comparable periods, so proper calculation of the index is important. For this purpose, the indexation coefficients can be calculated.
- 5. The indexing process should be clearly described and verified by the researcher.

The reliable data sources, where various historical or forecasted indexes can be found:

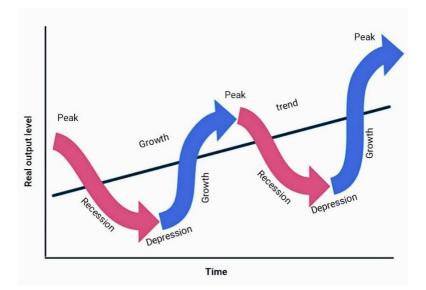
- 1. EU statistical office (Eurostat) <u>https://ec.europa.eu/eurostat;</u>
- 2. European central bank <u>https://www.ecb.europa.eu/home/html/index.en.html;</u>
- 3. World bank <u>https://data.worldbank.org/;</u>
- 4. OECD statistics <u>https://stats.oecd.org/;</u>
- 5. International monetary fund <u>https://www.imf.org/en/Data;</u>
- 6. National central bank, for example, Bank of Lithuania <u>https://www.lb.lt/lt/statistika;</u>
- 7. National Official statistics portal, for example, State Data Agency https://osp.stat.gov.lt/.

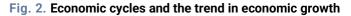
INDEXATION OF SCOs IN PROJECTS AT NATIONAL LEVEL

While the basic conditions for indexing SCOs, which allow the calculated SCOs to be recalculated in line with market developments, are described in the SCO methodology, equally important is the planning phase of the application, which is the process of projecting the future costs necessary for the successful implementation of the project. At this stage, predictive indices can be used to calculate the change in different groups of costs (e.g. a group of salary costs, a group of goods purchases costs, etc.). For short-term cost forecasting, indices published by public financial institutions are used. For example, in Lithuania, the Ministry of Finance of the Republic of Lithuania⁵ or the Bank of Lithuania⁶ publish forecast changes in wages, changes in prices of goods and services and other forecast macroeconomic indicators. The forecast macroeconomic indicators published by these institutions usually cover the current and two future years, and the use of such indicators for expenditure planning is therefore only feasible for a similar period to that planned for the project. If the project is planned to last longer (e.g. the project is planned to run for 5 years), a cost indexation method adapted to the project period should be used. One appropriate approach is the use of Average of indices of change in long-run expenditure.

Average of indices of change in long-run expenditure is calculated from the indices of changes in expenditure over a selected period reflecting different economic trends. This principle can be used to calculate the forecast change in prices of goods and services using consumer price indices, the forecast change in wages using wage indices, and the change in the mix of expenditures using the GDP deflator forecast indicator.

The choice of a reliable and representative period of actual macroeconomic indicators is important for the proper representation of economic trends, as economic processes are characterised by a certain degree of cyclicality. Economic cycles are recurrent fluctuations in economic activity, characterised by alternating phases of growth and decline. Economic cycles can last from a few years to several decades. Therefore, in order to properly reflect economic trends, it is recommended to choose actual expenditure changes over a period of at least 10 years, from which the average change is calculated. The calculated average rate of change reflects past economic trends that are likely to be repeated in the future due to the law of economic cyclicality. It should be noted that, while economic processes are characterised by ups and downs, in the long term there is an overall economic growth (see Fig. 2.).





⁵ Source: <u>https://finmin.lrv.lt/lt/aktualus-valstybes-finansu-duomenys/ekonomines-raidos-scenarijus/</u>

⁶ Source: <u>https://www.lb.lt/lt/naujausios-ekonomikos-prognozes</u>

The average rate of change in expenditure is calculated on the basis of official national statistics published by the statistical authorities. An example of how the projected change in consumer prices, the change in wages and the change in the GDP deflator can be calculated in Lithuania based on actual statistical macroeconomic indicators is given in Table 9. In the example, a period of 25 years (2000-2024) has been chosen, covering several economic cycles of recession and growth. The estimated magnitude is used to recalculate planned expenditure.

Year	HICP-based changes in consumer prices	Changes in the wage index	Changes in GDP deflator
2024	0,858	10,2	3,400
2023	8,983	12,6	9,050
2022	18,792	13,3	16,175
2021	4,625	10,6	5,950
2020	1,083	10,2	2,000
2019	2,225	8,8	2,325
2018	2,542	10,0	3,675
2017	3,717	8,6	4,025
2016	0,692	8,4	1,000
2015	-0,658	5,4	-0,025
2014	0,250	4,8	0,625
2013	1,167	5,1	0,825
2012	3,150	3,8	2,650
2011	4,125	2,9	5,550
2010	1,200	-3,3	2,350
2009	4,225	-4,4	-3,300
2008	11,125	19,4	10,225
2007	5,783	20,5	8,825
2006	3,758	17,2	6,575
2005	2,675	11,0	6,050
2004	1,167	7,2	3,175
2003	-1,075	5,8	-0,675
2002	0,342	3,2	4,075
2001	1,550	1,2	2,750
2000	1,092	-1,7	17,150
Average	3,336	7,632	4,577

Table 9. Calculation of average expenditure (change from previous period) based on consumer price indexes,	
wage index and GDP deflator	

Adjustment of planned expenditure by the projected rate of change in expenditure. The average change in expenditure is calculated as the average annual change in prices or wages over the period analysed compared to the previous period. The example above shows that the Lithuanian economy has a general upward trend over the period 2000-2024. In view of this, the calculated average rate of change in expenditure should be used to adjust the amounts of relevant expenditure planned for the calendar year. To adjust the amount of project expenditures properly, it is important to disaggregate the planned project expenditure by the planned incurrence over time. The more accurate the cost planning, the more accurate the calculation of the actual cost requirement. The possible sequence of cost recalculation is shown in Table 10.

The cost recalculation sequence presented has been applied to the cost recalculation of the whole project. Due to the diversity of costs, the GDP deflator rate of change was chosen. It is recommended to use the change in the wage index if the project expenditure consists only of wages and salaries, and the change in consumer price indexes for purchases of goods and services. In the case of a complex of expenditures, the GDP deflator may be used, or the other two indicators may be combined, separating the expenditures into their associated groups.

Table 10. Example of a sequence of adjustments to planned expenditure

General project information	Year 1 (N)	Year 2 (N+1)	Year 3 (N+2)	Year 4 (N+3)	Year 5 (N+4)
Planned value of the action (non- indexed), EUR			1.000.000,00		
Planned value of the action (non- indexed) disaggregated by planned expenditure per year, EUR	75.000,00	250.000,00	400.000,00	225.000,00	50.000,00
Average change in GDP deflator, percent	4,577				
First year	75.000,00	250.000,00	400.000,00	225.000,00	50.000,00
Second year's recalculation		261.442,50	418.308,00	235.298,25	52.288,50
Third year's recalculation			437.453,96	246.067,85	54.681,74
Fourth year's recalculation				257.330,38	57.184,53
Fifth year's recalculation					59.801,86
Adjusted value of project, EUR		·	1.091.028,70		

It should be noted that if the costs are to be paid on a simplified basis, it is important to choose the right indexation / recalculation rate. The principle of applying the indexation rates is chosen according to the groups of expenditure included in the established SCO rates:

- if the SCO amounts are intended to cover wage costs, it is recommended to apply the change in the wage index;
- if the SCO amounts are intended to compensate for the acquisition of goods, other assets or services, it is
 recommended to apply the change in consumer price indexes;
- if the SCO rates are intended to compensate a mix of expenditures (acquisition of goods, other assets, services and wages), it is recommended to use the change in the GDP deflator.

Where a project is subject to the financing not linked to costs scheme and the potential change in costs is assessed, future costs will not be recalculated, unless there are significant changes in the economy.

Summary. It is recommended that any project or activity should be subject to a recalculation of the estimated costs to be incurred if its implementation will last more than one year, as economic processes tend to increase. The recalculation of planned costs can be carried out using officially published forecast indexes, if they cover the planned period of implementation of the activities. If the planned period of implementation of the activities is longer, the average of the long-run average of the actual cost change indexes can be used. When indexing expenditure, it is important to choose the right recalculation rates for the different types of expenditure or to use recalculation rates that are appropriate for the mix of expenditure.



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