Business Statistics Division
Manufacture – Construction Indices
and Industrial Products Section

METHODOLOGICAL NOTE ON THE REVISION

OF THE MATERIALS COST INDEX FOR THE NEW RESIDENTIAL BUILDINGS CONSTRUCTION

Base year 2021 = 100.0

Piraeus, April 2024

Revised Material Costs Index for
New Residential Buildings Construction (2021=100.0)

1. The Materials Price Index is an input indicator and refers to the prices paid for the purchase of materials by developers of new residential buildings.

2. For the calculation of the weighting factors of the Materials Price Index with base year 2021=100.0, the results of the PRODCOM Survey of the year 2021 in 8-digit PRODCOM product breakdown were used. Therefore, the material weighting factors in the base year 2021 were calculated according to the changes in the value of PRODCOM product materials in the period 2015-2021. The following materials: Ivy Scylla, Marble Dust, Cement Boards, Copper Pipes, Brass Taps and Glass Bricks due to their small contribution to the weights will no longer be incorporated in the revised price indices.

3. The prices of these materials are those actually paid by the construction enterprises for materials supplied at the site and do not include VAT or other taxes. Prices are collected on a monthly basis and usually refer to the middle period of the reference month.

4. About 260 commercial or industrial enterprises, supplying materials to constructors or construction enterprises are used as the reporting units. The selection of the enterprises was made in the biggest urban cities, based on their turnover and the ability to provide continuous pricing. For electricity (mainly the construction electricity), prices are collected from the Public Power Corporation, while for water; data are provided by water supplies companies.

5. The geographical coverage refers to the whole of the country, noting that prices are collected only from the biggest cities of Greece according to the census 2021 results: (Greater Athens, Thessaloniki, Patras, Heraklion, Larisa and Volos).

6. The index calculates the price changes of 85 categories of materials aggregated in 15 groups, while the total number of observations (material prices) amounted to approximately 1,490.

7. The year 2021 was used as the base period for the index. The index was calculated starting in March 2024 and published from April 2024 onwards, recalculating the months of January and February 2024. Base prices were calculated using December 2023 material prices divided by the adjusted December 2023 price indices in the 2021 base year.

8. To record the prices and to process and calculate the indices, the Integrated Information System (IIS) of ELSTAT was used.

9. Indices were calculated using a variation of the Laspeyres formula, as follows:

$$I^{(t)} = \sum_{i=1}^{n} R_i^{(t)} \cdot w_i$$

Where:

$I^{(t)}$: *is the general index for the current period (month, year) t and*

$R_i^{(t)}$: *the individual index of the material i during the current period (month, year) t and*

w_i : *the corresponding weight of product i ,*

$w_i = \frac{x_i}{\sum_{i=1}^{n} x_i}$, x_i *: the value of the product i in the year 2021,*

i=1,2,3,...,n, where n *number of products.*

The individual index $R_i^{(t)}$ of the material *i* is the simple arithmetic mean of the relevant prices of this material's varieties obtained from all reporting units, i.e.:

$$R_i^{(t)} = \frac{1}{N_i} \sum_{j=1}^{N_i} \frac{P_{ij}^{(t)}}{P_{ij}^{(0)}}$$

Where :

N_i : *the count of materials varieties i from all reporting units,*

$P_{ij}^{(t)}$: *the price j of the material's variety i in the current period t and*

$P_{ij}^{(0)}$: *the average price j of the variety of the material i during base year 0, the 2021.*

10. Backdated calculations for the monthly and annual material price indices in the period January 2000 - December 2023, were adjusted calculated using the individual annual index of every material in the year 2021, according to the following formula:

$$R_{i(2021)}^{(t)} = R_{i(2015)}^{(t)} * \frac{100}{\bar{R}_{i(2015)}^{(2021)}}$$

Where:

$R_{i(2021)}^{(t)}$ *is the individual index of material i in the current period (month, year) t with 2021 as base year,*

$R_{i(2015)}^{(t)}$ *is the individual index of material i in the current period (month, year) t with 2015 as base year and*

$\bar{R}_{i(2015)}^{(2021)}$ *is the individual annual index of material i in 2021,with 2015 as base year.*

11. Table 1 in the Annex presents the revision weights of the indicators with base years 2015=100.0 and 2021=100.0.

12. The methodological manual of "Short-term Business Statistics, Interpretation and guidelines", including a comprehensive set of guidelines for the compilation of STS-Short-Term Statistics, is available at:

Methodology of short-term business statistics - Interpretation and Guidelines

Annex

Table 1: Weights with base year 2015=100.0 and 2021=100.0

Code	Description	Weighting Coefficients	
321	**Overall Material Costs Index**	**(2015=100.0)**	**(2015=100.0)**
1	Cement, mortars and ready-mixed concrete	16.25	17.18
1.1	Cement	3.15	8.06
1.2	Lime	0.73	0.45
1.3	Ready-mixed mortars	0.11	0.28
1.4	Ready-mixed concrete	10.75	6.51
1.5	Reinforcements of mortars and ready mixed concrete	1.51	1.87
2	Natural stone	1.76	1.51
2.1	Quarry gravel	0.21	0.31
2.2	Quarry sand	1.31	1.13
2.3	Pumice gravel	0.09	-
2.4	Sea sand	0.15	0.07
3	Marble products, granites	4.02	3.98
3.1	Marble slabs	2.55	3.85
3.2	Ground marble	0.66	-
3.3	Granites	0.81	0.31
4	Artificial stone	5.18	5.02
4.1	Bricks	3.27	2.82
4.2	Roof tiles	0.35	0.60
4.3	Lightweight bricks	0.10	0.32
4.4	Breeze blocks	0.09	0.32
4.5	Concrete flags	0.59	-
4.6	Roof insulation slabs	0.38	0.32
4.7	Plasterboard	0.40	0.65
5	Timber and builders'carpentry	14.33	6.16
5.1	Builders' timber	2.21	1.15
5.2	Parquet flooring	2.12	2.49
5.3	Windows	3.73	0.31
5.4	Internal doors	3.05	0.46
5.5	Wall cupboards	1.82	0.49
5.6	Cupboards	1.40	1.25
6	Basic metals	24.85	27.16
6.1	Steel reinforcing rods	13.34	14.47
6.2	Steel railings	0.57	0.83
6.3	Aluminium railings	0.78	0.85
6.4	Security gates and doors	1.32	1.43
6.5	Aluminium door and window frames	7.06	7.66
6.6	Garage doors	1.16	1.26
6.7	Stainless railings	0.62	0.67
7	Plumbing and heating equipment and supplies	9.92	10.50
7.1	Copper pipes	2.63	-
7.2	Steel pipes	0.11	0.55
7.3	Plastic pipes	1.12	3.22
7.4	Circulating pumps	0.18	0.24
7.5	Oil-fired central heating burners	0.35	0.59

7.6	Boilers	0.51	0.07
7.7	Central heating radiators	2.36	1.13
7.8	Seepage pits	0.03	0.04
7.9	Drain traps	0.03	0.09
7.10	Washbasins	0.34	0.72
7.11	Oil tanks	0.17	0.68
7.12	Brass taps	0.07	0.05
7.13	Brass stopcocks	0.14	-
7.14	Solar Heaters	0.13	1.88
7.15	Heat pump package units	1.75	1.24
8	Door and window fittings	2.01	1.78
8.1	Sliding door mechanisms	0.10	0.76
8.2	Garage door mechanisms	1.18	0.02
8.3	Locks in general	0.45	0.25
8.4	Door handles	0.28	0.76
9	Electrical equipment	4.79	6.65
9.1	Extractor fans	0.05	0.18
9.2	Plastic tubes	0.89	0.91
9.3	Cupreous Pipes	2.40	1.61
9.4	Switches	0.59	1.60
9.5	Power points	0.23	0.63
9.6	Panels	0.45	1.22
9.7	Entrance video	0.07	0.19
9.8	System of central aerial of television	0.11	0.30
10	Glass sheets	3.24	2.58
10.1	Plain glass	0.68	0.54
10.2	Safety glass	1.47	1.17
10.3	Mirrors	0.18	0.14
10.4	Glass bricks	0.01	-
10.5	Energy glass	0.90	0.72
11	Paints and varnishes	2.86	4.29
11.1	Emulsion paints	2.44	3.14
11.2	Enamel paints	0.05	0.06
11.3	Varnishes	0.05	0.21
11.4	Undercoats	0.26	0.41
11.5	Red lead	0.03	0.21
11.6	Resolvents of colours	0.03	0.27
12	Floor and wall tiles and sanitary ware	4.79	4.14
12.1	Floor and wall tiles generally	2.50	2.16
12.2	Washbasins	0.38	0.33
12.3	Toilet bowls	0.31	0.27
12.4	Bathroom suites	0.15	0.13
12.5	Sink mixer taps	0.12	0.10
12.6	Washbasin mixer taps	0.12	0.10
12.7	Bath mixer taps	0.14	0.12
12.8	Baths	0.94	0.81
12.9	Showers	0.13	0.11
13	Insulating materials	1.38	2.63
13.1	Bituminous emulsion	0.02	0.06
13.2	Cork-based insulating materials	0.07	0.19
13.3	Fibreglass	0.03	0.08
13.4	Expanded polystyrene	0.41	1.14

13.5	Tar-cloth	0.24	0.21
13.6	Pumice concrete	0.52	0.69
13.7	Sandwich insulators	0.06	0.17
13.8	Spreaded driers	0.03	0.08
14	Lifts	2.68	3.11
14.1	Lifts	2.68	3.11
15	Fuel for mechanical excavators and other building machinery	1.94	3.32
15.1	Diesel fuel	0.73	1.25
15.2	Electric energy	0.96	1.64
15.3	Water	0.25	0.43