**Ex-post CBA R1 Žarnovica – Šášovské Podhradie, update 2020**

Ex-post CBA R1 Žarnovica - Šášovské Podhradie was implemented in 2019 and it is available at <https://www.opii.gov.sk/metodicke-dokumenty/ex-post-cba>. The data used in the analysis were collected in the period 2008 to 2018.

As the Managing Authority, the Ministry of Transport and Construction of the Slovak Republic has proceeded to update the ex-post CBA by adjusting the original ex-post CBA with fair values ​​for 2019. The following data were included :

*GDP – source: Statistical Office of the SR*

*Inflation – source: Statistical Office of the SR;*

*Fuel prices – source: Statistical Office of the SR;*

*Traffic intensity – source: automated traffic counters of National Motorway Company;*

*Operation and Maintenance costs – source: National Motorway Company accounting;*

*Revenues – source: National Motorway Company accounting;*

*Accidents – source: Police of the SR*

Subsequently, the CBA of the entire project was recalculated including predictions until 2037 using the currently valid methodology for the Operational Programme Integrated Infrastructure (2014 - 2020). The original CBA had been calculated using the methodology of the previous Operational Programme Transport (2007 - 2013).

The evaluation of the financial and economic analysis below is a comparison of the current ex-post CBA analysis with the previous one implemented in the year 2019.

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**Evaluation of financial analysis**

The financial gap did not change, the updated CBA confirmed the financial gap of **100%.**

The financial indicators below are cumulative for the reference period of 30 years and the sums are discounted at the financial discount rate of 4%.

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| **Investment cost** | previous ex-post CBA  **175 608 578 EUR** | after the update  **175 608 578 EUR** | **0%** |

The stated investment costs are non-discounted and excluding VAT. The investment cost was not affected by the update.

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| **Residual value** | previous ex-post CBA  **47 940 412 EUR** | after the update  **47 940 412 EUR** | **0%** |

In accordance with the current CBA manual the updated residual value was recalculated using the method on the basis of the lifetime of the infrastructure components. The residual value was not affected by the update.

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| **Discounted**  **Revenues** | previous ex-post CBA  **-27 309 117 EUR** | after the update  **-26 274 191 EUR** | **+3.8%** |

Toll revenue has increased from EUR 2 572 644 (year 2018) to EUR 2 733 047 (year 2019). In the long-term view it means a slightly more positive forecast by 2037, but the fact is that the project cannot earn means for its operation. Revenue is lower than a zero due to a correction of the original CBA where no toll collection was considered in a no-project situation; toll revenue was calculated only on the expressway section R1 Žarnovica – Šášovské podhradie.

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| **Operation & Maintenance costs** | previous ex-post CBA  **897 241 EUR** | after the update  **1 823 860 EUR** | **+103.3%** |

The real maintenance of the R1 Žarnovica - Šášovské Podhradie section in 2019 was higher than expected. In line with the CBA methodology, it was necessary to recalculate the discounted operation and maintenance costs by the end of the project according to the updated expenditure (from year 2019), which in financial terms means that the project will be more costly.

**Evaluation of the economic analysis**

The cost benefit ratio (B/C) has increased from **2.84** to **3.36**. The increase of B/C value was caused due to the higher values of almost all indicators stated below. The ERR (economic rate of return) also increased from **17.1%** to **17.7%** but remains still several times higher than the economic discount rate.

All savings data below are discounted at an economic discount rate of 5%.

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| **Passenger travel time savings** | previous ex-post CBA  **316 222 135 EUR** | after the update  **333 684 192 EUR** | **+5.5%** |

Due to application of the real traffic intensities from several automatic traffic counters, the passenger transport (which affects the time savings of passengers much more than the freight transport) in 2019 on the Žarnovica - Žiar nad Hronom section was higher than the estimate; in the section Žiar nad Hronom – Šášovské podhradie passenger transport was lower than the estimate. Thus, after a total recalculation, the passenger time savings have increased.

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| **Fuel costs savings** | previous ex-post CBA  **3 038 166 EUR** | after the update  **12 926 615 EUR** | **+325.5%** |
| **Other vehicle operating costs savings** | previous ex-post CBA  **-7 993 054 EUR** | after the update  **25 942 157 EUR** | **+424.6%** |

The higher values ​​of the vehicle operating cost savings (vehicle operating costs consist of the fuel consumption costs and other operating costs of vehicles, such as depreciations) were mostly affected by lower freight traffic in 2019 across all measured sections and subsequently adjusting traffic volumes by 2037.

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| **Accident costs savings** | previous ex-post CBA  **54 919 095 EUR** | after the update  **54 503 861 EUR** | **-0.8%** |

The accident rate was calculated on the basis of the number of accidents for year 2019 both on the parallel road I/65 eventually on expressway R1.

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| **Emission costs savings** | previous ex-post CBA  **35 434 861 EUR** | after the update  **54 526 202 EUR** | **+53.9%** |

On the basis of the incremental fuel consumption (this is the most important basis for calculating emissions) throughout the reference period the savings were calculated. If there are fuel savings (see fuel costs savings paragraph above), there is also savings in emissions produced by the car traffic.

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| **Noise costs savings** | previous ex-post CBA  **9 745 117 EUR** | after the update  **9 990 345 EUR** | **+2.5%** |

Similarly (as for the emissions costs savings), if the traffic intensity is lower (especially freight transport; freight intensity decreased in 2019), the exposure of the population to noise is also lower.

**Final evaluation**

The financial analysis confirmed the assumption that the project could not fully cover the expenditures from its revenues, moreover at present, the financial contribution from the Cohesion Fund should be higher than originally provided.

The economic analysis confirmed the efficiency of spending public funds as the benefits of the project outweigh its costs. It is concluded that the project costs are legitimate due to its benefits for the society.