**Ex-post CBA R2 Ožďany - bypass**

The Grant Agreement for the expressway project „R2 Ožďany - bypass“ was signed on 09. 09. 2005. It was a financial contribution for the construction of 6,09 km of the expressway R2 Ožďany - bypass.  The Beneficiary (National Motorway Company, hereinafter as “NMC“) received a financial contribution of **SKK 1 356 685 804**, i.e. **EUR 45 027 740**, consisting of the contribution of **EUR** **38 273 579** from the European Regional Development Fund (85 % of the total amount) and the contribution of **EUR** **6 754 161** from the state budget (15% of the total amount). The contribution was determined on the basis of the financial analysis of the project’s cost/benefit analysis (CBA) at the financial  gap of **92,26 % (i.e. 92,26 % of the eligible project expenditure was provided from the Operational Programme Basic Infrastructure 2004 - 2006)**. The expressway R2 Ožďany - bypass is in operation since December 2006.

As the Managing Authority, the Ministry of Transport and Construction of the Slovak Republic proceeded to an ex-post review of CBA to improve the quality of future CBAs for road projects, to refine transport modelling of future projects and to help to update the CBA Methodological Guide (if proven neccessary).

This activity will contribute to increasing the efficiency of expenditure of public and EU funds.

The following actual input data for the period from 2006 to 2018 were considered for the ex-post CBA:

*GDP - source : Statistical Office of the SR, Ministry of Finance of the SR, Slovak CBA Guide OPII*

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

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

*Investment costs – source : National Motorway Company accounting;*

*Traffic intensity – source: nation traffic census 2015, automated traffic counters of NMC;*

*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 2033 using the currently valid methodology for the Operational Programme Integrated Infrastructure (2014 - 2020). The original CBA was calculated using the methodology of the previous Operational Programme Basic Infrastructure (2004 - 2006).

**Evaluation of financial analysis**

The financial gap has increased from **92,26 % to 100 %,** which means that the contribution from the operational programme resources should currently be higher than those in the Grant Agreement dated in 2005. The increase of the percentage of the financial gap is mainly due to decline of the real income generated by the project as well as higher amount of the investment cost.

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| **Investment cost** | original  **33 742 000 EUR** | updated  **48 935 183 EUR** | **+45 %** |

The stated investment costs are undiscounted and excluding VAT.

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| **Residual value** | original  **8 799 000 EUR** | updated  **16 078 477 EUR** | **+82,7 %** |

In accordance with the current CBA manual the updated residual value was recalculated using the "cash flow" method since the project generates net income.

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| **Revenues** | original  **3 019 000 EUR** | updated  **-14 899 805 EUR** | **-593 %** |

One of the reasons for the decline in expected revenues is the change in the method for their calculation; whereas in the original CBA only the toll revenue on the newly built expressway section R2 was quantified, the updated CBA includes the difference of toll revenues between the R2 section and the parallel road I/50.

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| **Operation & Maintenance costs** | original  **2 709 000 EUR** | updated  **-2 942 533 EUR** | **-208 %** |

Another change concerns the operation and maintenance costs of the project, which is caused by the change in the method of calculation in the current version of the CBA Methodological Guide. The current maintenance costs and periodic maintenance costs are incrementally higher due to the new CBA methodology: the considered area is calculated based on the size of the surface of the road in square meters, which is greater for the newly built expressway than for the parallel road I/50.

However, there is a notable cost saving in the toll collection costs and therefore the overall cost of operation and maintenance of the infrastructure is lower. The savings are caused by the method of determining the toll collection costs since the tolled vehicles pass on the built expressway section only through two toll sections, whereas there are many more toll sections on the parallel road I/50.

**Evaluation of the economic analysis**

The cost benefit ratio (B/C) increased from **1,82 to 2,39**. The increase was due to an increase in the savings of some of the indicators listed below, as well as the fact that the ex-post CBA was recalculated with the currently applicable methodology, which also includes the calculation of savings from externalities, i.e. emissions, environmental pollution and noise, where significant savings were calculated in the project in question.

We can therefore conclude that the project is beneficial to society, as indicator B / C exceeds 1.

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| **Passenger travel time savings** | original  **73 702 000 EUR** | updated  **40 013 478 EUR** | **-46 %** |

Time savings have been reduced because of the use of the real traffic intensities, which are lower regarding passenger cars than those assumed by the transport model.

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| **Fuel costs savings** | original **4 349 000 EUR** | updated  **14 656 746 EUR** | **+237 %** |
| **Úspora ostatných prevádzkových nákladov** | original **32 055 000 EUR** | updated  **104 115 EUR** | **-** |

Vehicle operating costs consist of the fuel consumption costs (where savings are generated) and other operating costs of vehicles, such as depreciations, where the projects also generates savings, although these savings are considerably lower than calculated in the original CBA.

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| **Accident costs savings** | original  **8 010 000 EUR** | updated  **16 437 390 EUR** | **+105 %** |

The accident rate was calculated on the basis of the number of accidents for years 2005 – 2018.

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| **Emission costs savings** | original  **0 EUR** | updated  **27 887 418 EUR** | **-** |

Emission savings were not quantified in the original CBA. Based on the incremental fuel consumption (these form the basis for calculation of emissions) over the entire reference period significant savings were also calculated.

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| **Noise costs savings** | original  **0 EUR** | updated  **169 746 EUR** | **-** |

Savings in the noise costs were not quantified in the original CBA. In general, construction of expressway sections means that the population is less exposed to noise from passenger and the freight traffic, which was also confirmed in the analysed section of the expressway.

**Final evaluation**

The CBA's retrospective assessment showed justification for funding the project from EU funds. The financial analysis has confirmed the assumption that the project is unable to fully cover the expenditure of its revenue, and therefore a financial contribution from the European Regional Development Fund is justified. The economic analysis confirmed the efficiency of the public funds expenditures as well as justification of the project, since the project's benefits to the society as a whole, outweigh its costs.