**Ex-post CBA D1 Jánovce – Jablonov**

The Grant Agreement for the motorway project "D1 Jánovce - Jablonov" was concluded on 21 July 2011. Addendum no. 1 to the Grant Agreement was concluded on 21 November 2011. Addendum no. 2 to the Grant Agreement was amended by a decision of European Commission and concluded on 19 May 2014. Addendum no. 3 to the Grant Agreement included investment costs adjusted by a revised CBA and was concluded on 7 December 2015.

It was a financial contribution for the construction of 18.54 km of the motorway section D1 Jánovce – Jablonov. The Beneficiary (National Motorway Company, hereinafter as “NMC”) received a financial contribution of **EUR 172 198 626.98** consisting of the contribution of **EUR 146 368 832.83** from the Cohesion Fund (85% of the total amount) and the contribution of **EUR 25 829 794.05** 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 **97.04 %** (**meaning that 97.04 % of the total eligible project expenditure was provided from the Operational Program Transport 2007 - 2013**). The motorway D1 Jánovce - Jablonov has been in operation since November 2015.

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

The following input data actual for period 2011-2018 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 using the currently valid methodology for the Operational Programme Transport (2007 - 2013) including predictions until 2040. The latest updated CBA submitted to the Managing Authority in the course of implementation of the project was used as the basis for this ex-post analysis.

**Evaluation of financial analysis**

The financial gap has increased from **97.07%** to **100%** which means that the contribution from the operational programme resources for the eligible expenses should currently be higher than those in the Grant Agreement. The increase of the percentage of the financial gap is mainly due to decline of the real income from the toll system, i.e. the project is unable to cover the expenses needed for operation and maintenance of the infrastructure within the reference period of 30 years.

The financial indicators below are cumulative for the reference period of 30 years and the sums are excluding any discounts (financial discount tariff-rate).

|  |  |  |  |
| --- | --- | --- | --- |
| **Investment cost** | original**266 030 102 EUR** | updated**287 515 642 EUR** | **+ 8.08%** |

The stated investment costs are undiscounted and excluding VAT. The total investment costs of the construction are higher mainly due to the unfavourable geological subsoil which was not anticipated in the project documentation and which was reflected in increased financing of the retaining wall. The total investment costs were also adversely affected by the tragic event in Kurimany where the concrete motorway bridge collapsed.

|  |  |  |  |
| --- | --- | --- | --- |
| **Residual value** | original**126 742 406 EUR** | updated**151 875 080 EUR** | **+ 19.83%** |

Higher investment costs also have an impact on the residual value. The residual value was recalculated using the 'lifetime of infrastructure elements' method.

|  |  |  |  |
| --- | --- | --- | --- |
| **Revenues** | original**81 164 870EUR** | updated**54 297 473 EUR** | **- 33.1%** |

Toll revenue (as the only project income) is directly dependent on intensities of freight transport. The intensities of freight transport in this section are lower compared to the expected intensities of traffic from the original CBA. Data on the toll collection in EUR are directly from the NDS a.s. for the years 2015 - 2018 with the prediction of development on the basis of expected intensities of freight transport.

|  |  |  |  |
| --- | --- | --- | --- |
| **Costs** | original**77 294 430 EUR** | updated**78 247 659 EUR** | **+ 1.23%** |

The project costs consist of the costs of operating and maintaining the infrastructure and the costs of operating the toll system. The original calculation of expenses is relatively accurate compared to the real costs incurred for the years 2015 - 2018 in the given motorway section. The data in EUR are also from the accountancy of NDS a.s.

**Evaluation of economic analysis**

The cost/benefit ratio (B / C) has increased from **4.02** to **5.02**. The increase was due to greater time savings for passengers on the affected motorway section as well as for the entire adjacent road network of the surrounding area. Also, the number of accidents was lower than expected, resulting in higher cumulative accident savings.

All savings data below are discounted at an economic discount rate of 5.5%.

|  |  |  |  |
| --- | --- | --- | --- |
| **Passenger travel time****savings** | original**497 858 353 EUR** | updated**852 614 527 EUR** | **+ 71.26%** |

A transport model for the section of D1 Jánovce – Jablonov including an adjacent road network with a total length of 108.26km was developed when the application was submitted to the European Commission. Using real-time traffic intensities the interaction between 19 sections of the modelled area resulted in greater time savings for passengers (especially higher intensities on parallel and adjacent first-class roads.) An even more accurate assessment of time savings will be available in 2020 subsequent to a national traffic census on the first and second class roads, as well as from automatic traffic counters of NDS a.s., eventually from the toll portals data.

|  |  |  |  |
| --- | --- | --- | --- |
| **Vehicle operating costs savings** | original**224 276 071 EUR** | updated**170 579 995 EUR** | **- 23.94%** |

Vehicle operating costs are composed of fuel consumption and other vehicle operating costs (such as vehicle wear) where savings are reduced. This is again due to the interaction of the real measured intensities on the modelled road network where the key indicators were the lengths (in meters) of the sections considered and the speed of the vehicles in those sections, from which the average fuel consumption was calculated.

|  |  |  |  |
| --- | --- | --- | --- |
| **Accident costs savings** | original**27 892 102 EUR** | updated**44 404 276 EUR** | **+ 59.2%** |

The accident rate was calculated on the basis of the number of accidents for the years 2016 - 2018, where a lower number of fatal accidents as well as a lower number of accidents with both serious and minor injuries were recorded compared to the original CBA analysis assumption. Not only the section itself but also the entire adjacent network of first and second class roads entered the accident analysis.

**Final evaluation**

The ex-post evaluation of the CBA has confirmed the justification of funding the project from EU funds

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. The overall benefits for the company have increased even further in the project under consideration by the Operational Programme Transport methodology.