

We have verified the financial and economic return of our projects.

We have retrospectively evaluated and analysed two major road projects financed from the EU funds that are already in operation. This ex-post analysis is a practice that is well-established abroad and we have proven the benefits of our projects for society as well as those from the financial point of view. The projects that were evaluated are D1 Fričovce - Svinia and R2 Žiar nad Hronom - bypass. Both projects were funded within the Operational Program Transport.

The Managing Authority for OPII decided to verify and update the CBA with the objective of improving the future quality of the projects' CBAs submitted in OPII and subsequently increasing effectiveness of the funds drawing from the national and EU sources.

D1 Fričovce – Svinia

The Grant Agreement for D1 Fričovce – Svinia was signed on 6th March 2012. A financial contribution was granted for construction of the new motorway section of D1 in the length of 11.22km. The beneficiary - National Motorway Company was granted the funding of **99 779 394 EUR** which consisted of **84 812 485 EUR** from the Cohesion Fund (85% of the total amount) and the national contribution of **14 966 909 EUR** (15% of the total amount). The financial contribution was based on a financial analysis (within the cost-benefit analysis – CBA) of the project where the funding gap resulted in **71.36 %**. The motorway section D1 Fričovce – Svinia has been in use since December 2015.

Assessment of the financial analysis

The funding gap has raised from **71.36% to 100%** which means that amount of the EU grant for eligible costs should be bigger than the amount included in the Grant Agreement from 2012. This is due to the fact that the project's toll revenues cannot cover the expenses related to operation costs and the infrastructure maintenance within any year of the 30-years long reference period.

Investment cost	original 139 577 995 EUR	updated 162 310 157EUR
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Increase in the Investment cost was caused by a landslide in Chmiňany municipality cadastre and subsequent redevelopment of the territory, resulting in signing of amendments to the contract for construction works.

Residual value	original 8 046 123 EUR	updated 0 EUR
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As the expenditures related to maintenance of the project are higher than revenues in 30-years horizon the residual value, calculated based on financial flows, is negative what is represented by 0 value.

Revenues	original 79 673 090 EUR	updated 30 202 925 EUR
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The project's toll revenues are directly dependent on heavy traffic intensities. The heavy traffic intensities on selected road section are lower compared to the anticipated traffic intensities in the original CBA.

Infrastructure and maintenance cost	original 42 711 185 EUR	updated 64 970 134 EUR
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Maintenance and operation costs of the infrastructure were calculated with use of the OPD methodology. The Managing Authority for OPII updated the calculation method which makes the estimation of costs more accurate.

Assessment of the economic analysis

The revenue-to-expense ratio has decreased from **4.86** to **2.28** due to the reasons described below. This means that even though the revenue-to-expense ratio has decreased the project is still valid because benefits for society outweigh the costs related to the project implementation.

Passenger travel time	original 516 664 864 EUR	updated 284 172 333 EUR
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The lower traffic intensity is the cause of the decrease of the passenger travel time. Since 2017 the real traffic data started to converge towards the predicted values.

Vehicle operating cost	original 2 397 976 EUR	updated -3 647 902 EUR
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There are no savings in the vehicle operating cost. This is caused by the lower traffic intensities as well as the fact that road I/18 is shorter in metres than the section of the D1 motorway in this area.

Accidents	original 10 189 015 EUR	updated 8 970 026 EUR
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Only the data of the two-year period were available which is not sufficient to make any final conclusions. Update of the traffic accidents rate in the CBA indicates that the real serious injuries in evaluated section are higher than the predicted values, which is the main cause of the lower accidents savings.

Conclusions

The ex-post CBA proved the justification for financing of the project from EU funds. The financial analysis confirmed the assumption that the project as such is unable to cover the expenses with its incomes and therefore a contribution from the Cohesion fund is necessary. The economic analysis also confirmed the effectiveness of using public sources as the project's revenues for the society outweigh the expenses.

R2 Žiar nad Hronom – bypass

The Grant Agreement for R2 Žiar nad Hronom - bypass was signed on 10th April 2013. A financial contribution was granted for construction of the new expressway section R2 in the length of 5.7km. The beneficiary - National Motorway Company was granted the funding of **29 972 528.55 EUR** which consisted of **25 476 649.27 EUR** from the Cohesion Fund (85% of total amount) and the national contribution of **4 495 879.28 EUR** (15% of the total amount). The financial contribution was based on a financial analysis (within the cost-benefit analysis – CBA) of the project and the funding gap resulted in **98.15 %**. The expressway section R2 Žiar nad Hronom - bypass has been in use since December 2014.

Assessment of the financial analysis

The funding gap has raised from **98.15% to 100%** which means that amount of the EU grant for eligible costs should be bigger than the amount included in the Grant Agreement from 2013. This is due to the fact that the project's toll revenues cannot cover expenses related to operation costs and the infrastructure maintenance within any year of the 30-years long reference period.

Investment cost	original 30 869 906 EUR	updated 33 331 084 EUR
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Increase in the Investment cost was caused primarily by landslide during the construction period and the subsequent redevelopment of the territory, resulting in signing of amendments to the contract for construction works.

Residual value	original 0 EUR	updated 0 EUR
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Updated inputs did not cause any change of this indicator.

Revenues	original 5 381 475 EUR	updated 8 413 369 EUR
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The project's toll revenues are directly dependent on heavy traffic intensities. The heavy traffic intensities on selected road section are lower compared to the anticipated traffic intensities in the original CBA.

Infrastructure and maintenance cost	original 4 936 446 EUR	updated 10 292 548 EUR
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Maintenance and operation costs of the infrastructure were calculated with use of the OPD methodology. The Managing Authority for OPII updated the calculation method which makes the estimation of costs more accurate.

Assessment of the economic analysis

The revenue-to-expense ratio has decreased from **3.54** to **2.07** due to the reasons described below. This means that even though the revenue-to-expense ratio has decreased the project is still valid because benefits for society outweigh the costs related to the project implementation.

Passenger travel time	original 74 073 143 EUR	updated 77 956 170 EUR
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The higher traffic intensity on the new road has caused the increase of the passenger travel time. In 2017 the real traffic data show almost double increase of the vehicles using the new bypass compared to the original prediction.

Vehicle operating cost	original 4 842 271 EUR	updated -9 000 359 EUR
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There are no savings in the vehicle operating cost. This is caused by the lower traffic intensities on all selected road sections even though the intensity on the new expressway bypass of R2 Žiar nad Hronom has increased.

Accidents	original 279 301 EUR	updated -16 899 650 EUR
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Update of the traffic accidents shows significantly higher accident rate than what was estimated in the original CBA. The Slovak Traffic Police does not register any “critical section” in this area although the main road through city of Žiar nad Hronom is still classified as very dangerous.

Conclusions

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In ex-post CBA the following input data were updated based on years 2015 – 2017 (exception being GDP where prediction explained below was used):

- *GDP – source: Statistical Office of the Slovak Republic, Ministry of Finance of the Slovak Republic, CBA guide for OPII version 2*
- *Inflation – source: Statistical Office of the Slovak Republic*
- *Average fuel prices – source: Statistical Office of the Slovak Republic*
- *Investment cost – source: National Motorway Company accounting*
- *Traffic volumes – source: nation-wide traffic count of SSC 2015, automatic traffic counter of NDS, a.s.*
- *Infrastructure and maintenance cost – source: National Motorway Company accounting*
- *Revenues – source: National Motorway Company accounting*
- *Accidents – source: Police Force of the Slovak republic*

CBA of whole project was re-counted along with prediction to year 2040.