

Abstract

The Slovak motorway network has been expanded recently by several motorway sections. The following sections/portions: Žilina Strážov - Žilina Brodno and Svrčinovec - Skalité, were evaluated in terms of the impact of the project on the lives of residents in the context of redirecting transit traffic from existing roads. In this context, special attention was paid to the assessment of their impact on the quality of life and the environment in the affected areas.

The method of counterfactual analysis was used in the evaluation of both projects. The objective of this impact assessment was to find out the benefits connected with the implementation of both projects from various points of view, including the impact on the volume of road traffic, travel time and impact on the environment.

In order to assess the intensity of traffic on the original („without project“) and new roads, a traffic model including passenger and freight traffic was developed. The volumes were calibrated based on actual data collected from automated traffic counters on the new motorway sections, as well as national traffic reading data in 2022. The assessment included a questionnaire survey targeted at residents in the affected areas and guided interviews with stakeholders. The answers obtained were a valuable source of information about the impact of the construction of motorway sections on the lives of residents.

The motorway construction project in the section Žilina Strážov - Žilina Brodno had an apparent positive impact on the flow of traffic in Žilina and its surroundings, especially by diverting transit traffic outside the city. Approximately 6,000 vehicles a day were diverted to the newly built tunnel, which eased traffic in the city. From the analysis of the impact on the quality of life of residents in the built-up area as part of the assessment, it follows that the project has a positive impact on the population and contributes to reducing the level of noise and emissions. The analysis further shows an increase in the flow of traffic on the original route, and therefore also fuel savings. Since there is a steady flow traffic on the new route, which is shorter than the original route through the city, it can be concluded that the project brought savings in travel costs for residents using both routes. The answers of the residents showed that most of them (85%) positively accepted the construction of this motorway section. About 36% of respondents said they now drive more often because of the new bypass. This confirms that the construction of a new, high-capacity road has the potential to generate the expected benefits of this evaluated project. Half of the respondents believe that new economic activities or jobs have been created as a result of investments in road infrastructure. The main objection to these responses, which is objectively justified from the point of view of the analysis processor, is the non-completion of several sections on the entire D3 motorway, which limits the usability of the motorway as a whole. However, it can be assumed that, after completion these sections, the traveling in Slovakia will be significantly facilitated. In terms of environmental impacts, the calculations show that the project had a positive impact on the population and contributed to the reduction of noise and emissions. However, from the subjective point of view of the residents, this reduction is not significant.

Similar effects can also be observed in the case of the **Svrčinovec - Skalité motorway section**. The construction of this section had a positive impact on the inhabitants of the villages of Svrčinovec, Čierne and Skalité, mainly due to the diversion of 1,700 trucks (per day) from the road I/12, which was previously used for transit traffic. The diversion of transit passenger traffic was connected with less effects than with the trucks. In both cases, however, the project had a

positive impact on the transport of people and goods between Slovakia and Poland. The analysis of the impact on the residents' quality of life shows that the project has a positive impact on the residents and contributes to decreased levels of noise and pollution. This new motorway section is located outside the built-up area, transit traffic is diverted from the municipalities, which leads to a reduction in the traffic load on various roads and, consequently, to an improvement in the quality of the environment. It is assumed that the noise reduction benefits specified in the CBA will be achieved. As part of the survey conducted, there was often an opinion that the investment makes it possible to improve commuting to work or school. The majority of residents of the affected municipalities assess the impact of the project as positive overall, but a significant part (27%) believes that the construction had a negative impact on the environment. The main negative from the residents point of view was the length of the construction, which, according to the answers received, in total it lasted more than 20 years. Similar to the case of the Žilina motorway, the remaining sections of the D3 motorway are needed as quickly as possible in order to fully utilize its potential. From the point of view of the residents, the absence of an entrance on the motorway in the village of Skalité to Bratislava is perceived as very critical, which leads to the need to connect to the motorway in Poland and return to Slovakia. In terms of environmental impacts, it was found that the project has a positive impact on the residents of the affected municipalities, both in terms of noise and emission reduction. However, from the point of view of the residents, the situation is completely different. The significant majority of them (69%) say that the noise level has increased and they consider noise reduction measures to be insufficient.

Overall, it can be concluded that **the construction of both sections of the D3 motorway had many positive effects not only on the international transit connection between Slovakia and Poland, but also on the development of the region.** These constructions led to a reduction in travel time and an increase in the flow of traffic, which had positive economic effects. More efficient transport logistics within Slovakia and between Slovakia and Poland supports the growth of the region and its surroundings. The construction of these motorway sections had an impact on the increase of traffic safety, the attractiveness of the region for investors, as well as on the opening of new possibilities for the development of tourism. However, the full potential of the D3 motorway is still limited by its unfinished sections. The completion of the entire D3 motorway can be a significant stimulus for the further development of the region.

Summary

Impact assessment of interventions on projects implemented within priority axis 2 of the OPII will make it possible to improve the quality of the program cycle, as well as to increase the benefits from the interventions provided in order to implement projects of the construction and modernization of transport infrastructure projects. The relevant outputs and recommendations from the evaluations will be used in the implementation of the programming period 2021 - 2027.