Transport analysis

Monitoring of the development of official transport models in Sweden 2013

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Report 2014:3

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Summary

According to its instructions, Transport Analysis (Trafikanalys) is tasked with continuously monitoring the Swedish Transport Administration's development of models for cost-benefit analysis (CBA). In carrying out is task, Transport Analysis focuses on the Transport Administration's organization, its administration, its model development in 2013 and its model development projected for 2014. The results are based primarily on a questionnaire survey. The survey and the monitoring comprise work in seven different development areas: a national freight model (SAMGODS), passenger models (SAMPERS/SAMKALK), a calculus tool for road investments (EVA), a calculus tool for rail investments (Bansek), a collection of less frequently used tools for CBA (Other tools), the work on estimating how various impacts affect each other (Impact relationships), work on principles and parameters to be used in CBA (ASEK).

Transport Analysis has assessed work performed and announced in relation to the Transport Administration's current development plan, previous years' results from monitoring the Swedish Transport Administration, and insights from various users of the model systems. The aim is that the results will provide feedback to the government on work performed by the Transport Administration and support the Transport Administration in its ongoing model development.

General considerations

The Transport Administration reports having spent slightly less than SEK 28.8 million on administration and development in 2013. This can be compared with the approximately SEK 30.9 million reported for 2012. If we include administration and development projects not confined to any particular development area, total spending in 2013 was almost SEK 38.2 million. Of this amount, costs for personnel amounted to slightly over SEK 11.8 million; the amount of hours put in by in-house personnel in 2013 was approximately 20 per cent lower than in 2012.

Resources budgeted for 2013 were significantly higher than what was actually consumed. According to the Transport Administration, this was due to the fact that work on the national transport plan for 2014-2025 turned out to be more extensive than expected. Not being able to fulfil its projections is a recurrent problem for the division responsible for model development; in both 2012 and 2011, there was a shortfall in resources to administer and develop models and methods for CBA, which the Transport Administration explained in terms of unexpectedly high demand for other projects involving the staff. These are problems that the Transport Administration needs to resolve. Based on reported information, Transport Analysis finds a need to improve the planning of work and follow-up procedures. The Transport Administration is working on the problem, but it remains to be seen to what extent this will yield results. In general, Transport Analysis considers that the model and method development would benefit from a more consistent level of development projects using in-house personnel.

Transport Analysis continues to experience difficulty monitoring the work of the Transport Administration. The Transport Administration needs to improve its reporting of the *purpose*, *prioritization*, and *results* of various projects. Not only is this issue important for the ability to monitor the work, but it is also and ultimately a matter of citizens' ability to see how the

government uses allocated funds. According to Transport Analysis, it is important that openness, transparency, and accessibility be manifested in the Transport Administration's work, since they are important arguments for model development being supervised by a government authority.

According to Transport Analysis, it is important that the development work have a clear strategic focus and not be subordinated to needs-based analysis. The current development plan was published late in 2012, and Transport Analysis has assumed that it governed work in 2013. The Transport Administration's comments on Transport Analysis' draft report indicate that a new development plan is being prepared and will be published on 1 April 2014. In several of the comments, the Transport Administration already refers to development areas in the coming plan, making it more difficult to follow the Administration's strategic development work. The need for a new plan could be explained by the new planning process for investments in transport infrastructure, applicable as of 2013. If the development plan is to be ongoing, involving annual updates, it should be made easier to distinguish in the plan between what the Transport Administration highlights as new requirements and objectives, and what are considered closed matters. The development plan also blends concrete measures with strategic objectives. It would be desirable if the Transport Administration could more clearly distinguish what is to drive long-term model and method development from short-term efforts to improve existing models/methods.

Transport Analysis remains sceptical as to whether development work should be classified to such a high degree as research. In the 2013 budget for the administrative areas among which the Transport Administration distributes its efforts, slightly more than 40 per cent is classified as research. However, some of the projected investments in research may largely correspond to what was previously referred to as development. Transport Analysis previously maintained that some of the projects now being started based on research funding should not be categorized as research, but rather as pure development work.

To set priorities among development proposals, it is important that the intended areas of application (i.e., weaknesses and strengths) be described clearly. Such documentation does not exist, or at least has not been openly reported.

Much of the work involving the model systems is procured. Transport Analysis has still not seen any clear policy as to how the Transport Administration plans to develop and maintain an appropriate level of competence and how projects are to be distributed among in-house personnel and external resources. For several reasons, the Transport Administration is unlikely to be able to establish and retain comprehensive internal competence in all professional areas, but must instead develop a professional procurement role. The Transport Administration refers to prepared framework agreements and procurement routines, though Transport Analysis would prefer to see more policy-oriented documentation.

The time and cost reporting were easier to monitor in 2013, but Transport Analysis would prefer to see a more detailed expense coding that would make it easier to distinguish between different types of work and how outcomes should be distributed among different development areas.

The Transport Administration seems to intend to provide information on models and model work via its website, though Transport Analysis still finds considerable room for improvement in this. In certain cases, the Transport Administration refers to information on its website that is not actually there. The website should be used to provide information on concluded projects in the various development areas (including links to documentation).

SAMGODS

So far, the SAMGODS system seems to be aligned with the Transport Administration's development plan, which essentially implies completion of an initial quality-assured version of SAMGODS, in which the applicability for cost-benefit analysis has high priority. Though the plan's original objective was to complete the model in 2013, this ultimately proved impossible. A new version is now being prepared for autumn 2014.

As in 2012, the Transport Administration used a variant of the SAMGODS model for its analysis tasks. This variant is not as well documented as is the regular model, but it allows the user to study capacity restrictions on rail traffic. In 2013, the Transport Administration was involved in developing the method by which capacity shortfalls could be analysed, and how this might be implemented in the regular SAMGODS model. Aside from this, development work has primarily concerned improved opportunities to validate the SAMGODS model, an improved method for estimating demand matrices, and studies of the feasibility of introducing stochastic elements into the model.

The Transport Administration has endeavoured to broaden the user base of the SAMGODS model. In 2013, the model was used in several studies by users outside the Transport Administration, which according to Transport Analysis is highly favourable and important to the ongoing development of the model.

SAMPERS/SAMKALK

According to Transport Analysis, the development of SAMPERS/SAMKALK is difficult to follow. It is particularly difficult to form an opinion as to the purpose of and the results obtained from various initiatives. The information provided on the Transport Administration's website is very limited, and the responses to the Transport Analysis questionnaire are too general. A clear description of planned and completed work on SAMPERS/SAMKALK is particularly important, since the Transport Administration regularly conducts various initiatives (both large and small) that together are expected to contribute to further development of the model system.

Transport Analysis finds it surprisingly difficult to see, as regards SAMPERS/SAMKALK, how specified initiatives are related to the Transport Administration's development plan.

Transport Analysis has not received any satisfactory description of how the Transport Administration actually go by to plan future development of SAMPERS/SAMKALK. In reply to a question about this, the Transport Administration only refers to a number of working groups and how often they meet.

In the current development plan, the Transport Administration refers to a number of central problems relating to SAMPERS/SAMKALK (the national model) and the associated network model (assignment model), EMME. As far as Transport Analysis can see, the Transport Administration has not, judging from the questionnaire responses, addressed any of these problems in 2013. This is surprising, given that more resources were allocated to the model development in 2013 than in 2012. Transport Analysis finds that these development areas should be given higher priority by the Transport Administration.

EVA, Bansek and other tools

Regarding EVA, the description of work completed in 2013 is essentially the same as the description for the 2012 operating year. The Transport Administration cites various updates of

the model, for example, involving new valuations of external effects. Since completed work is only briefly described, it is difficult to determine how the 2013 work differs from the 2012 work. Even the description of work planned for coming years is almost identical to the description in the prior year's questionnaire, namely, that the Transport Administration should focus on developing a new tool that in addition to evaluating the benefits of investments in the road network can also evaluate investments in rail, bicycling and pedestrian infrastructure.

No documentation of EVA is presented on the website. Despite this, the Transport Administration refers to its website in response to Transport Analysis' request for published documentation of the model.

Regarding Bansek, the Transport Administration states that work on the model was not prioritized in 2013 due to work on the Swedish national transport plan for 2014–2025.

Regarding other tools, the Transport Administration has improved the information on its website and Transport Analysis finds that the document is now satisfactory. Above all, there are contact persons for all tools.

In its follow-up report on the preceding year, Transport Analysis called for analytical tools regarding air and sea. Transport Analysis finds that in 2013 the Transport Administration initiated a project to compile principles for evaluating the costs and benefits of investments in shipping lanes. Further initiatives to come in 2014 have been posted.

Impact relationships

The work that, according to the preceding year's questionnaire, was planned for 2013 seems largely to have been postponed to 2014. This applies to impact relationships for stage 1 and stage 2 measures (i.e. measures to reduce travel demand – stage 1 – and measures involving small investments, such as introducing automatic speed monitoring – stage 2), impact relationships of operation and maintenance measures, and impact relationships linked to pedestrian and cyclist safety.

After the relatively extensive efforts in 2012, work carried out in 2013 was much more limited, and resource consumption declined by slightly more than 70 per cent.

The Transport Administration reports that one initiative was completed in 2013, namely, the preparation of impact relationships for evaluating effects on the climate.

ASEK

The organisation of the ASEK work is excellently described.

The Transport Administration reports relatively numerous completed initiatives in 2013: for example, new value estimates of road-traffic noise and of freight transport times, CBA methods for evaluating operation and maintenance of infrastructure, and guidelines for handling international shipments in CBA. New value estimates of road traffic noise and of freight transport times have been particularly in demand for some time.

Transport Analysis believes that further analyses of how to incorporate taxation effects into CBA. No work on this is referred to in the questionnaire responses for either 2013 or 2014.

According to Transport Analysis, the recommended travel time valuations for the various transport modes and passenger groups in ASEK 5 are problematic and should be discussed further.

Transport Analysis approves of the Transport Administration’s recent commencement of the supplementation and pedagogical development of the documentation of parameter values and calculation principles for CBA.

Transport analysis

Transport Analysis is a Swedish agency for transport policy analysis. We analyse and evaluate proposed and implemented measures within the sphere of transport policy. We are also responsible for official statistics in the transport and communication sectors. Transport Analysis was established in April 2010 with its head office in Stockholm and a branch office in Östersund.

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