



Veloverkehr in den Agglomerationen – Einflussfaktoren, Massnahmen und Potenziale

Déplacements cyclistes dans les agglomérations – facteurs d'influence, mesures et potentiels

Bicycle traffic in agglomerations – influencing factors, measures and potentials

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Forschungsprojekt SVI 2004/069 auf Antrag der Schweizerischen Vereinigung der Verkehrsingenieure und Verkehrsexperten (SVI)

Summary

The present research SVI 2004 / 069 "Cycling traffic in Swiss agglomerations - influencing factors, measures and potentials" is based on the existing and very different use of cycle between the Swiss agglomerations.

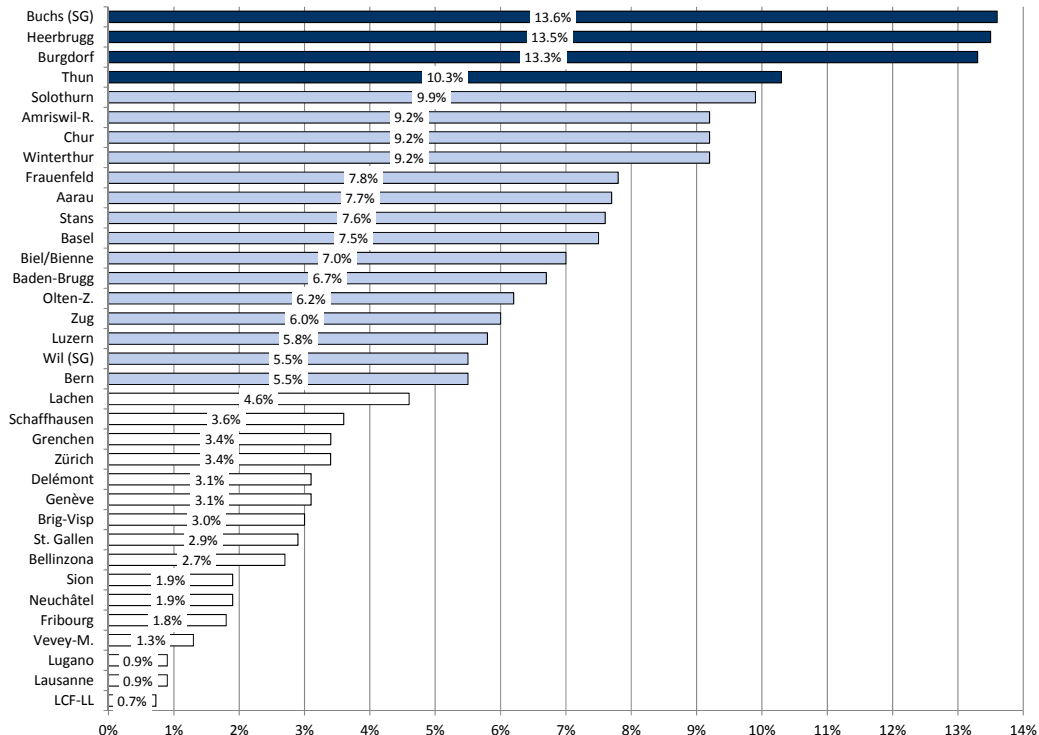


Fig. 1: Bicycle use in analysed agglomerations according to the Swiss national travel behaviour microcensus 2010 (share of stages done by bicycle)

In the context of a currently declining share of cycling in the modal split in Switzerland (see Chapter 1), it has been examined which promotion measures for cycling had been realized in the Swiss agglomerations, which effect these measures have on the bicycle use in urban areas and what potential exists for the future bicycle use.

Proceeding

Four methodological approaches have been applied by the research team (see Chapter 2): an analysis of the Swiss and international literature on the effects and potentials of cycling promotion, an expert survey with nearly 80 professionals from the Swiss agglomerations on the situation and on the effects of cycle promotion during the past ten years, a quantitative analysis on the effects of cycling promotion measures on the various forms of bicycle use in Swiss agglomerations as well as a systemic analysis on two case studies, which examined the causalities and characteristics of promotion measures for cycling traffic.

Standing of international research and literature

Based on the literature analysis (see Chapter 3), different influencing factors and categories of cycling promotion which have a relevant impact on the bicycle use could be identified. These include among others the distances, the topography, the weather conditions, the traffic policy, the cost component, the personal attitude, the availability of the bicycles and their technologies, the obstacles in the traffic, the infrastructures for rolling and parked bicycles, the speed, the feeling of security and the competing alternatives of other means of transport. However, few is known about the effect of such measures (and measures categories) and about the specific potential of bicycle use in Swiss agglomerations.

Evaluation of cycle traffic promotion in agglomerations

The expert survey on cycling promotion and its use in Swiss agglomerations (see Chapter 4) shows a wide range of both the quantity and the quality of implemented bicycle promotion measures. It became evident that both the variety and the quality of the realized promotion measures for cycling are evaluated to be strongly positive in the cities known as "cycle cities" and in their agglomerations (Winterthur, Burgdorf, Basel, Chur), whereas the agglomerations of Latin Switzerland (La Chaux-de-Fonds-Le Locle, Vevey-Montreux, Bellinzona) as well as Lachen show negative evaluations. According to the interviewed experts, especially the agglomerations of Biel/Bienne, Chur, Lausanne and Neuchâtel show significant progress in promoting cycle transport, whereas Bellinzona, Lachen, La Chaux-de-Fonds-Le Locle, Buchs (SG) or Vevey-Montreux hardly have improved since the year 2000. The expert survey doesn't show a clear correlation between promotion measures for cycling and the current use of bicycle, because also agglomerations with small improvements since 2000 show a high bicycle use (E.g. Buchs (SG), Thun).

Potential of cycle traffic promotion in agglomerations

The quantitative analysis (see Chapter 5) showed that, in a number of agglomerations, a significant increase in bicycle use can be achieved in the short or medium term, if they implement promoting measures for cycling of the same quality as the today's "best in class" agglomerations of Switzerland. This is also valid for Swiss agglomerations which have restrictive external conditions for bicycle use.

In six of the examined agglomerations, the analysis comes to the conclusion that the proportion of the bicycles can be increased in the modal split alone with these supporting measures to more than double (agglomerations Lausanne, Lugano, Fribourg, Neuchâtel, Vevey-Montreux and La Chaux-de-Fonds-Le Locle). Another 16 of the 35 analysed agglomerations can achieve growth rates between 20 and 100 percent with already implemented measures in Switzerland and with the same quality level as the best Swiss agglomerations (agglomerations of Zurich, Genève, Frauenfeld, Bellinzona, Thun, Delémont, Stans, Buchs (SG), Amriswil-Romanshorn, Grenchen, Sion, Heerbrugg Altstätten, Wil (SG), Brig-Visp, Baden-Brugg and Lachen). In terms of promotion measures for cycling, thirteen agglomerations are already among the best in class in Switzerland. Therefore, with the usual measures in Switzerland, they will only be able to reach smaller increases of the bicycle use up to approximately twelve percent or less (agglomerations Winterthur, Chur, Schaffhausen, Biel/Bienne, Basel, Solothurn, Luzern, Bern, St. Gallen, Aarau and Olten-Zofingen and Zug). According to this simulation, for the agglomeration of Burgdorf as best in class of benchmark, no increase will arise. This last group of agglomerations can only reach substantial increases of the bicycle use (by more than ten per cent), if it intensifies the promotion measures for cycling substantially above the level commonly applied in Switzerland and also if ideally it implements new types of support measures, which have proved to be effective in the benchmark European agglomerations with even higher level of bicycle use.

Systemic interdependencies in case studies

The systemic analysis on the interdependencies of bicycle use and cycle traffic promotion illuminated the two case studies for the agglomerations of Lucerne and St.Gallen (see Chapter 6). The focus of this study was on the analysis of causal relationships between implemented measures, the local/regional context of the cycle traffic and the bicycle use of both agglomerations. The systemic analysis shows that a promising approach in the promotion of cycling traffic – even with comparable external conditions – must be designed differently for each agglomeration. Today, in the agglomeration of St.Gallen, it exists a strong will to promote the cycling traffic, however, the unstable system presents a major challenge to responsible persons. But the agglomerations of Lucerne show clearly nameable influencing factors (competition/dominance of individual traffic, incomplete infrastructure for cycling, compact settlement area and short travel times by cycle), which can serve as good starting points for a future promotion strategy for the cycling traffic.

Synthesis

The results of the present research project name on the one hand specific key actions of promoting cycling traffic in the Swiss agglomerations (see Chapter 7). These are mainly in favour of a high-quality bicycle parking and bicycle-specific information and communication

measures. On the other hand, it becomes evident that cycle use can be increased considerably if the agglomerations approach the "best in class" and realize their scope, quality and intensity of promotion measures for cycling traffic. For agglomerations that have an above-average bicycle use for Swiss conditions, new categories and intensities of measures must be implemented.

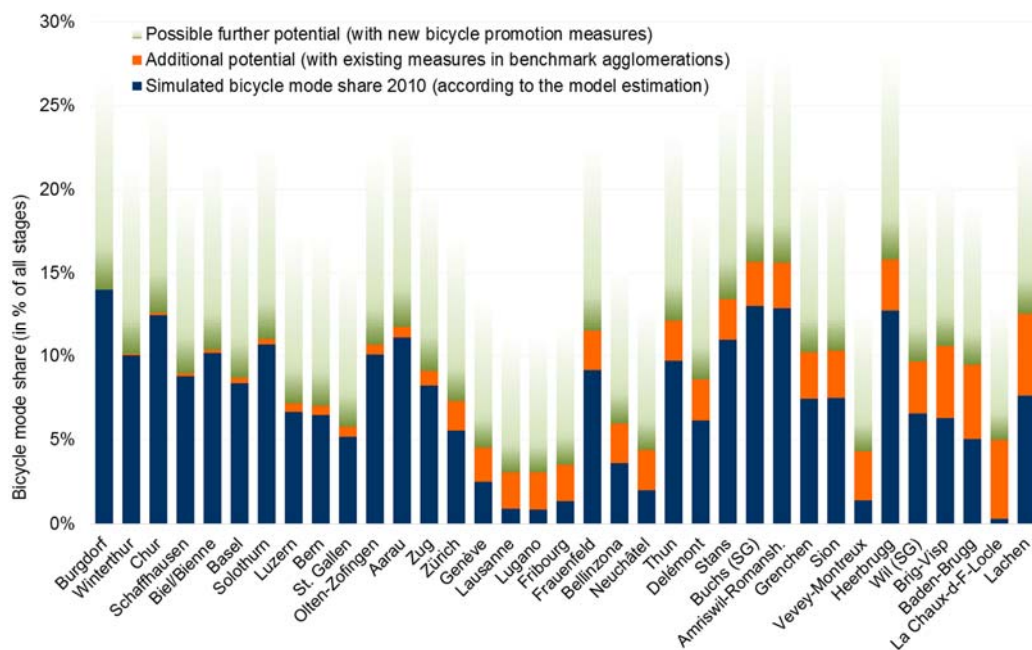


Fig. 2: Bicycle use and growth potential in analysed agglomerations according to the model estimation (share of stages done by bicycle)

According to the findings from the literature review and the expert survey, the time period for the implementation of such further measures might be large. Until the establishment of a strong and stable cycling culture with high bicycle use, a strong persistence is necessary and the time frame for a full implementation might rather be a question of decades than years.