

Social Spatial Influences of New Transport Infrastructure (SoSINeTi)

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Background

Increasing expansion of transport infrastructure is taking place in more and more countries. This trend, strongly encouraged by the globalization process, is reflected in ever-shorter journey times in both national and international travel. During such developments, extensive urban-planning alterations in areas that are being provided with new transport infrastructure tend to be viewed purely in terms of economic and efficiency benefits – and particularly in terms of the time saved when travelling the distance from starting-point to destination. However, there has been little research on the socio-spatial effects of new transport infrastructure systems. There is no awareness or sensibility for such changes, and as a result hardly any methods are available to investigate phenomena of this type. The present study is therefore intended to add a new level to research on the efficacy of new transport facilities – namely, the socio-spatial effects of transport infrastructure. Also the study tries to find methods to investigate and measure social changes because of new transport infrastructure.

Conceptual framework and theoretical underpinnings

Accessibility in this case means not only the time needed and distance to a newly developed transport infrastructure. The instrument looks also on accessibility aspects before and after the new transport infrastructure was established in the same municipality. Also it has a stronger look on regions which are no longer connected, because of the new transport infrastructure, traversing another way.

So accessibility is measured with the number of connections to the next larger city. These numbers of connections are compared over the years, especially before and after the improvement of the new transport infrastructure. In the same way travel times will be collected and compared, in a way of time table analysis.

To this quantitative meaning and measurement of accessibility, there are additional qualitative approaches by observations of human behaviour before and after the new transport infrastructure was built. Theoretical background is within urban sociology, “Raumsoziologie” and mobility studies, using mobile methods.

This methods and definitions are used to find a new level beside economic and ecological aspects of new build transport infrastructure, this means, to find social influences. So the sociology approach was used to find out, what influences better accessibility has on human behaviour and what social and behavioural changes can be observed in better accessible municipalities.

Operational aspects

The instrument measures different types of accessibility. First travel times between municipalities are measured. Also these travel times are compared over years to have an overall view. But not only travel times are measured, also the number of connections are counted and compared over the years. But accessibility means also changes in social spatial terms. So the development of new apartments for rent is counted and greeting and talking behaviour of people living in the better accessible municipalities are observed. This is all to see differences in social behaviour in fact of the new transport infrastructure. Questionnaires with shop owners are used to show better accessibility. Better Accessibility means therefore: longer shop opening times, renovations in the shops, more international and not only local shops, more articles and what kind of articles (more local or national orientated?). So these Questionnaires help to understand accessibility in a more social way. To start with all these social observations, expert interviews are useful as a pretest for preparing all observations.

All the data is available, but needs investigation and research. Also the list is not completed here. So in other cases maybe other data will be more interesting.

No soft- or hardware is needed. Maybe a statistic programme can be used, like SPSS. But at the end it is more concerned with analysing qualitative data. And there for no good computer programmes are available.

All observations are long term observations within 5 up to 10 years. The first computation is possible after three years. The time needed for computation depends on the available data and the research questions, but needs no longer than one or two weeks. But it has to be repeated every year, maybe more often.

No special requirements in technical aspects are needed. Maybe some interest in social sciences and empirical methods

Relevance for planning practice

Because it is a long-term research and observation, this instrument on social influences of new transport infrastructures can be used for future planning. Accessibility to infrastructure is not only seen on economic and ecological basis, but also on social facts. Specific on this instrument is that it provides information about former projects. With this information it is possible to make future projects for good accessible transport infrastructure more socially acceptable.

The instrument is not been used yet and it is not published at the moment. It will be published in 2012. But practitioners are involved in the project and know about it. So it helps architects and urban designers to create a socially acceptable surrounding for a new transport infrastructure and it is also about, how to design accessible buildings and places for transport facilities.

One mayor problem of the instrument is the long-term operation time of the instrument, before valid data is available. This fits not within a planning context. And also five years after a new transport infrastructure was built, no special interest on social effects is drawn by planners, who are already preparing the next project.

Despite this, the instrument is really easy to apply in other countries. Only new ideas about social research have to been learned, like doing an observation or preparing a questionnaire. The needed and useful data varies from case to case.

Strengths and limitations

In scientific way it is hard to find any methods to measure social accessibility. So the used methods are a kind of testing methods. Because social effects are overall hard to measure and also hard to interpret, all findings sometimes are very subjective. Nevertheless the instrument is easy to use and produce much qualitative data.

The instrument is most useful after implementing a new transport infrastructure, because it is hard to analysis social behaviour before something happened in reality. But it is useful for ideas in urban planning for constructing new accessible buildings and places. So the instrument is more useful for future accessibility tasks than for the case used for the research. This means other projects can learn from the faults, but also from the good things of the observed project.

The advantage by using the instrument is, to create maybe better social contexts for new transport infrastructure. But most important is even to think about social influences of new transport infrastructure and accessibility. One major disadvantage is that the instrument cannot be used every time in the same way and it needs long term observations. But this disadvantage can also been seen as advantage, because every case study is best prepared and the methods used are exactly those ones that are needed.

Future improvements are planned. So the instrument should be improved by going on with the case study longer than 5 years after the new transport infrastructure was opened. This is helpful to observe long term social changes in better accessible municipalities. It will also help to improve the methods to observe social spatial changes because of new transport infrastructure and better accessibility.

Figures

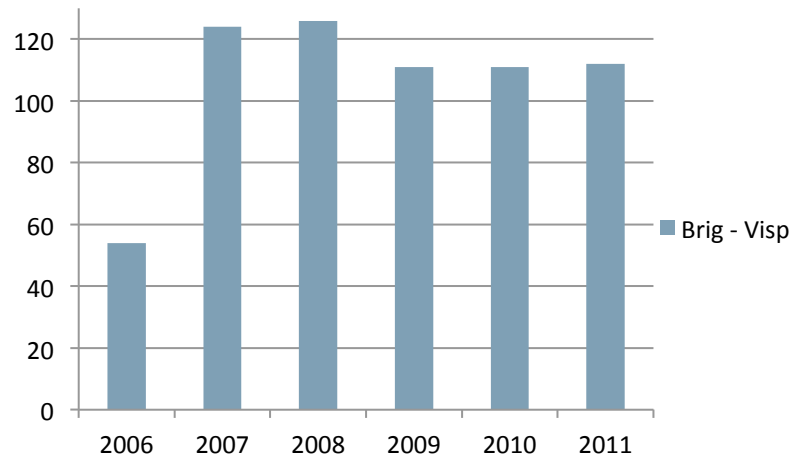


Figure 1 Time table analysis: number of trains between better accessible towns because of new improved transport infrastructure