

The Backside of the Coin

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1 Introduction

The invention of modern transport modes, the railway, the car and the airplane was appreciated enthusiastically by the human society and also by all experts dealing with transport and economy. The magic of high speeds seemed to overcome the limits in time and space given by the limited speed of pedestrians, horses and sailing boats.

Everything was easier to reach, time savings were possible – firstly without any negative effects. The frontside of the coin was so impressive, that nobody thought that there must also be a backside. But if there is a big frontside, the backside has the same size. This paper describe, based on theoretical and empirical based research, the main systemic mistakes of the traditional “frontside view”, which has ignored structural and economic effects of the modern transport system. These effects explain the undesirable but inevitable negative effects of the transport system for some parts of our economy and for some regions in our countries and the continent. Much to much of the today political decisions in the transport and economic sector is still based on hopes and not on rational scientific based ground – they are still irrational.

2 Traditional view

Doubtless a good transport infrastructure is a precondition for a good economy and the economic development of a region. On the other side the modern transport system has also increasing adverse effects. Noise, air pollution and accidents are the main and best known negative direct effects of the mechanical transport system. These effects were not planned and also not taken into consideration in the decision process decades ago.

New transport infrastructure always raises the expectation of a winning situation on both ends of the road. Land use planners and regional economists propose a continual extension and development of the transport infrastructure which seems necessary to continue the economic growth.

One of the basic principles was and is the dogma of a better connection between peripheral regions with central structures in order to decrease the disparities between them. Unfortunately the disparities are increasing with the better transport system and not disappearing. The central regions are

Mechanical transport systems, driven by external energy, are a rather new invention of the human society, which was only familiar with the body energy driven pedestrians. Everybody was fascinated from the possibilities of these new modes of transport. “Mobility growth” and “increasing the speed to save time” seem to be possible. A scientific analysis shows us now much more from the “backside of the coin”. Car mobility is growing, but all other kinds of mobility are declining. The number of trips remained the same. There is also no time saving possible in the system. If speed is increased, the distances are proportional increasing. This had effects on built and economic structures. Increasing speed extinguish small units and support the big ones. This explains the miraculous exponential growth of big international corporations and the dying of villages, small shops etc. The transport system of today distort the “market conditions” totally. The “backside of the coin” can now support decisions with the necessary information to prevent mistakes.

becoming stronger and the peripheral regions are losing not only money but also structures and power.

Motorways are built around cities, with the proposal to solve transport problems and to support the city economy. The effects are everywhere the same, the traffic problems are increasing after a short period of relaxation, congestion does not disappear but grow and instead of improving the cities economy, the remaining economic structures in the cities are dying faster while peripheral centralised shopping centres, with more or less no connection to the city are flourishing.

3 Four basic questions

This raises some questions: Is it true that each improvement of a transport infra-

structure improves the economic situation?

Are there just winners or also losers of a better transport system?

Who are the winners and who are the losers in the system?

What is a “good” transport infrastructure or a good transport system?

4 Scientific background

Before answering these questions it is necessary to specify the approach to the solutions.

The mechanical transport system is a rather new technical invention to the human society, which was familiar only with the pedestrian speed for thousands of years. The effects of this invention were not well understood by the society, the experts, the politicians and the engineers. The result was the creation of myths of the transport system and its effects. So the myth of “increasing mobility” was born, since it was observed that the number of car trips increased with the motorization. But it was not recognised that with the increase of car trips the number of trips with all other modes decreased. So there is no increase of mobility but only a shift of trips from one mode to another. The “Mobility” of people remained the same, the indicator “trip-rate” has not changed.

The second myth is that of “saving time due to increasing the speed of the transport system”. This experience can be proved in the single case but not in the transport system itself. In the transport system the duration – and distribution – of travel time is independent from the mode and constant. The qualified scientific community in the transport sector is using this