

DOCTORAL DISSERTATION ABSTRACT:

“ROAD TRANSPORT IN THE LIGHT OF CONTEMPORARY SOCIO-ECONOMIC CHALLENGES, WITH PARTICULAR CONSIDERATION OF KOŚCIERSKI POWIAT”.

Road transport is distinguished by its dominant share in transport and the commonness of use. The dominance of road transport is evident both in the inland transport of EU goods, in which over 73% of transport performance is carried out by this branch of transport, as well as in passenger transport, in which the share of road transport exceeds 90% of land transport performance, of which almost 82% is passenger car transport. The commonness is illustrated by the motorisation rate, the value of which in the European Union (EU) in 2017 was 507 vehicles per 1000 inhabitants and was lower than in Poland - 571 vehicles per 1000 inhabitants. In 2016, over 1.3 billion cars were registered worldwide, and forecasts indicate that by 2040 this number will increase to 2 billion.

The position of this branch of transport on the transport market was influenced by many factors, such as: changes in demand (its product range structure, transport distance, size of the load lot), socio-economic benefits related to its development, policy of supporting its development for example through construction of highways and advantages of this branch, such as: door-to-door transport, flexibility and relatively low operating costs.

The aim of this dissertation is to examine the impact of contemporary socio-economic challenges and changes, both globally and regionally, on the position of road transport on the transport market and the role of road transport in shaping these changes.

Five hypotheses were formulated in this dissertation:

1. There are interdependencies between modern socio-economic development trends and road transport.
2. The internalisation of external costs is an effective mechanism for partially reducing the negative impact of road transport on the environment.
3. Road transport generates external benefits, in particular it stimulates the innovativeness of the economy.

4. Intelligent Transport Systems (ITS) affect the competitiveness of road transport and transport companies.

5. Road transport is an important factor in the socio-economic development of the poorest regions - it increases transport accessibility and entrepreneurship associated with this branch of transport.

The dissertation shows that road transport is closely related to globalisation, which generates an increasing demand for services also in this branch of transport, while road transport allows improving the quality of services provided in global supply chains. However, road transport is also the least safe and the most environmentally harmful mode of transport. It has a great impact on human health and safety, land development and air pollution, which results in high external costs for this mode of transport. The challenge of the globalised world is the idea of sustainable development as a response to the problem of growing transport needs, the costs of meeting them and environmental degradation, which road transport significantly contributes to.

It is presented in the dissertation that road transport is also a generator of external benefits, one of which is innovation. Innovations in road transport increase its competitive advantage and enable it to meet the growing transport needs in an economically efficient way. They also reduce the external costs of transport, so they can facilitate the sustainable development of transport. Intelligent Transport Systems (ITS) are a special type of innovation in road transport. By using them, the efficiency of car transport can be increased. ITS mitigate the negative effects of congestion and reduce the safety risk, for example by integrating branches and means of transport. Another tool encouraging pro-ecological behaviour, both for users and car manufacturers, may be the internalisation of external costs of transport, understood as taking into account external costs in the whole market process by using legal or price regulations.

Research carried out in this dissertation show that road transport is an important factor in the socio-economic development of the poorest regions - it increases transport accessibility and entrepreneurship associated with this branch of transport. Road transport has a positive impact on the quality of life of society, especially in the smallest regions with low transport accessibility, where it is often the only possible form of meeting the need for mobility and the main direction of entrepreneurship development.

The results of the research carried out in the dissertation confirm the research hypotheses that there are multidimensional relationships between road transport and socio-economic development. Despite numerous actions aimed at reducing this branch of transport due to high external costs, both on a micro and macro scale, its role in the economy will be significant. A sustainable development policy aimed at satisfying social needs in an economically viable and

ecologically rational way will stimulate the development of innovation, in particular ITS. They will reduce the external costs of this branch of transport, but at the same time will stimulate the development of innovation in the economy.

A handwritten signature in blue ink, appearing to be 'K. J. S.', located in the upper right quadrant of the page.