2018 - 2023

# CERIS: Civil Engineering Research and Innovation for Sustainability

# TiTuSS – Transport Infrastructure and Urban Spatial Structure: Economic, Social & Environmental

# **Summary**

TiTuSS focuses on the relationship between transport and urban spatial structure and how it can be better managed to enhance regional and national productivity together with more sustainable and inclusive growth.

The main aim of TiTuSS is to create new knowledge on the relationship between transport improvements and urban spatial structure in Portugal, and how changes in this relationship can be better managed to enhance regional and national productivity together with more sustainable and inclusive growth.

The key objectives are:

- To provide new evidence for Portugal, and also for Lisbon Metropolitan Area, on the effects of transport improvements on the urban spatial structure, particularly location patterns of the population and economic activities.
- To provide new evidence for Portugal on the relationship between productivity and urban agglomeration externalities resulting from improvements to the transport network (i.e. wider economic impacts).
- 3. To provide new evidence for Portugal on the contribution of transportation infrastructure,

particularly improvements in regional accessibility resulting from the expansion of the road network to spatial cohesion, particularly a more sustainable and inclusive growth.

The objectives will be achieved by addressing the following research questions:

- To what extent has the expansion of Portugal's road network over the last 30 years altered patterns of urban spatial structure? How much has it contributed to patterns of suburbanisation and dispersion of economic activity?
- What is the magnitude of the productivity benefits from urban agglomeration economies induced through transport improvements, and have the benefits enlarged or reduced over time as a result of the expansion of the motorway network and associated changes in regional accessibility?
- To what extent have the improvements in regional accessibility levels that followed the extension of the motorway road network contributed to greater territorial cohesion, particularly to sustainable and inclusive growth?



Figure 1. Evolution of the Portuguese freeway network.



# **Project Reference**

PTDC/EGE-ECO/28805/2017

# Leading Institution

UECE – Unidade de Estudos sobre Complexidade e Economia (Portugal)

#### **Partners**

IST-ID – Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento (Portugal)

# **CERIS Principal Investigator**

João Abreu e Silva (jaao.abreu.silva@tecnico.ulisboa.pt)

#### **CERIS Research Team**

Nuno Afonso

# **Funding**

FCT – Fundação para a Ciência e a Tecnologia

# Period

2018-2022

# Total

229 539.27€

# **CERIS**

43 486.12€

# **Project Website**

patriciacmelo.weebly.com/tituss.