Traffic Congestion in Malta:

A Quantitative Analysis of the factors leading to Congestion, attitudes towards Congestion, and acceptable solutions by the Maltese public.

Ing Karl Camilleri | Institute of Business and Commerce

Background

In pursuing a study on Traffic Congestion, the main aim of the researcher is to identify the key drivers and uncertainties that cause the network under analysis to fail and congest. Said drivers can be 'demographics, behavioural economics, environment, changing social demands and values, international standards, fossil fuel availability, technology development, power multinational corporations, flows of people. As such a number of drivers have been identified that effect traffic congestion in Malta. These will be the fundamental building blocks and used as independent variables to analyse quantitatively and look for relationships and explanations from the emerging data.

Research Objectives

- Which factors are the most influential and have a direct correlation with traffic congestion in Malta?
- Which congestion inducing factor is most well understood and most influential (and how) by Maltese drivers?
- Are there any correlations between any of the dependent variables listed and what can be concluded vis a vis traffic congestion?
- Would any, if at all, of the proposed solutions have support or preference within the Maltese population?

Methodology

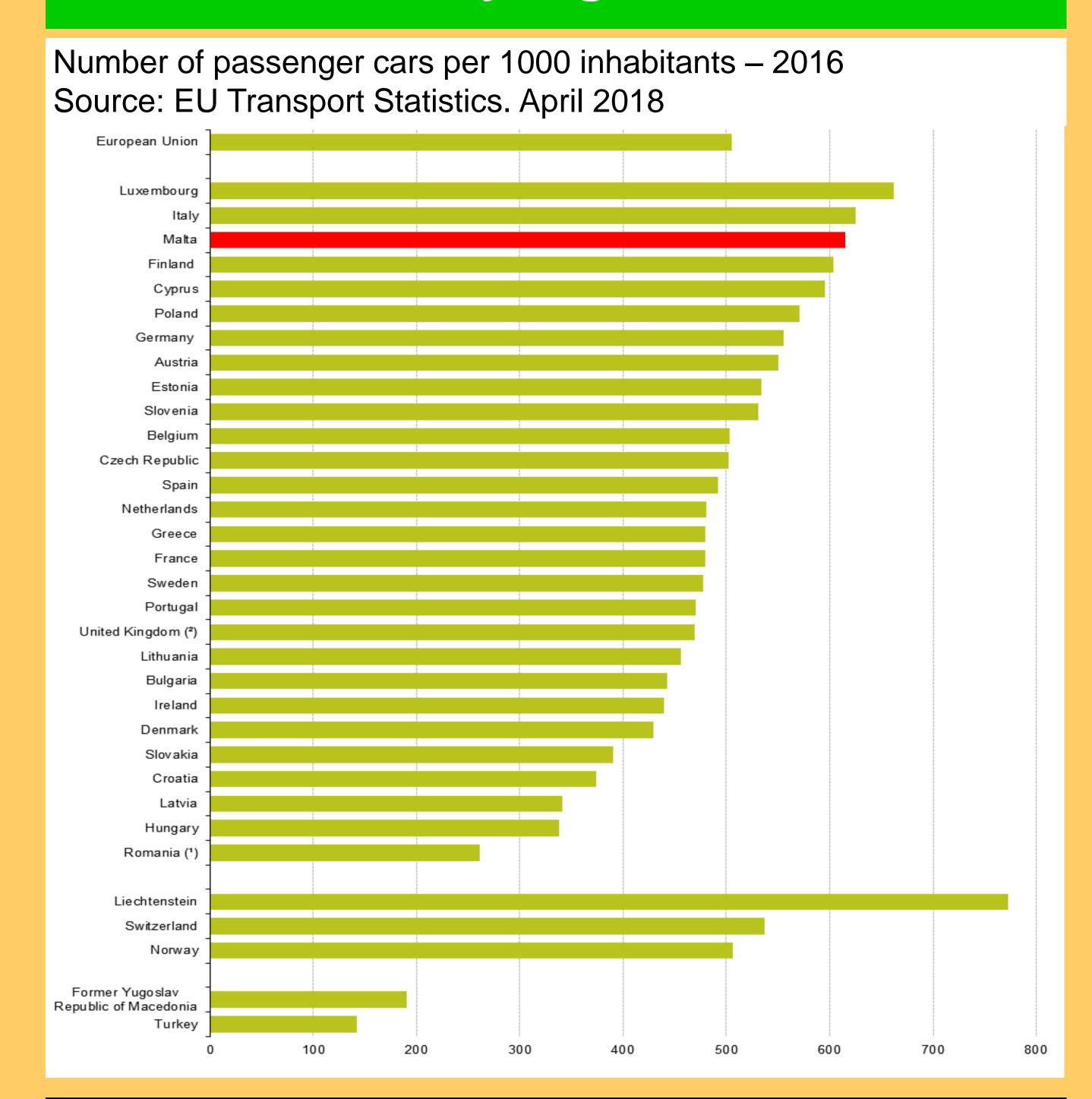
The research methodology that will be used in this study is a quantitative analysis, based on a postpositivist approach, through a deterministic philosophy, by collecting data through an information instrument (survey/questionnaire) collated from respondents, where questions will be made on the variables identified to be able to analyse their relationship, in order to answer the questions and hypothesis raised by this study. The instrument that will be used will contain mainly a number of close ended questions, that will allow a pre-determined interpretation through multi-variate analysis. The main aim is to ensure that the data gathered allows for clear and unequivocal data validity (ensuring that the instrument gathers the data for what is needed) and that all the data is reliable (i.e. that all the data is consistent and will show the same result in any set of varying conditions - repeatability).

Key Research Variables

- The Government's auto-dependent policies
- The implementation of exclusive and segregated lanes for public transport
- The adoption of BRT (Bus Rapid Transport) or LRT (Light Rail Transport)
- The introduction of congestion charges or user charges such as tolls or tariff /km
- The legislation of a tax for sole car use or tax rebates for car-pooling
- The use of non-transport technology
- The need to use a car in Malta
- The local authorities discipline in ensuring drivers abide by the law, and the administration of fines



Key Figures



References

- Alaa, G. et al. 2018, 'Economic impact of urban traffic congestion on the main routes in Mansoura City, Egypt', *International Journal for Traffic and Transport Engineering*, Vol 8(2), 148-165
- Attard, M. 2015, 'The impact of global environmental change on Transport in Malta', Xjenza Online *Journal of the Malta Chamber of Scientists*, Issue 3, 141-152
- Fields, G. et al. 2008, 'Relieving Congestion by adding road capacity and tolling', *International Journal of Sustainable Transportation*, Vol 3, Nos 5-6, 360-372
- Hut, Y. 2016, 'Traffic Congestion, Polycentriticy and intra-urban firm location choices: A nested logit model for the Los Angeles Metropolitan area.' *Journal* of Regional Science, Vol 56, No 4, 683-716
- Meng, L. L. 2010, 'After the Car', Polity Press Publication, Foresight, Vol12, Issue 5, 92-94
- Sohail, I. (2003), 'Alternative futures of transport, *Foresight*, Vol 5, Issue 1, 34-43