

**TECHNICAL
NOTE N° 11**

**PREVENTING
CAR-ORIENTED
DEVELOPMENT AND
INCREASING ROAD
CONGESTION IN
RAPIDLY GROWING
ECONOMIES:**

**CROSS-CITY
COMPARISONS**

CREATE PROJECT

**Congestion Reduction in Europe,
Advancing Transport Efficiency**

TECHNICAL NOTE PREPARED BY:

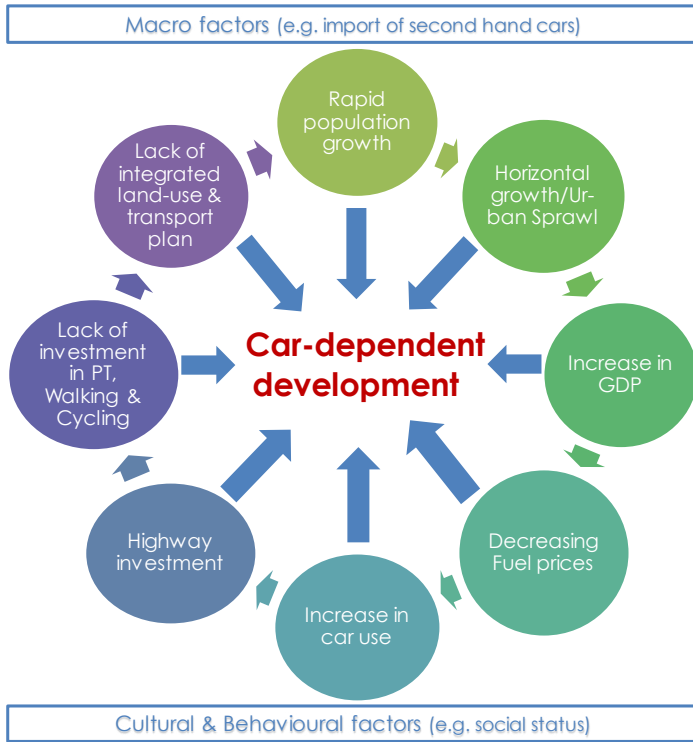
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What factors contribute to car-oriented urban developments in growing economies? And how to prevent them?

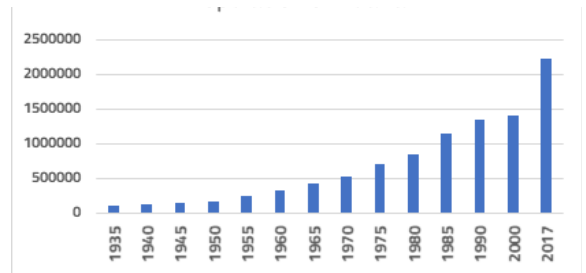
Quantitative and qualitative research undertaken in 10 large cities across Europe and the Middle East as part of the CREATE project indicates that in Tallinn, Bucharest, Skopje, Adana and Amman, car-use levels and congestion have been rapidly increasing. The question is, what factors have led to increasing car-use levels in those cities?



'Unless we understand the root of a problem we cannot solve it'

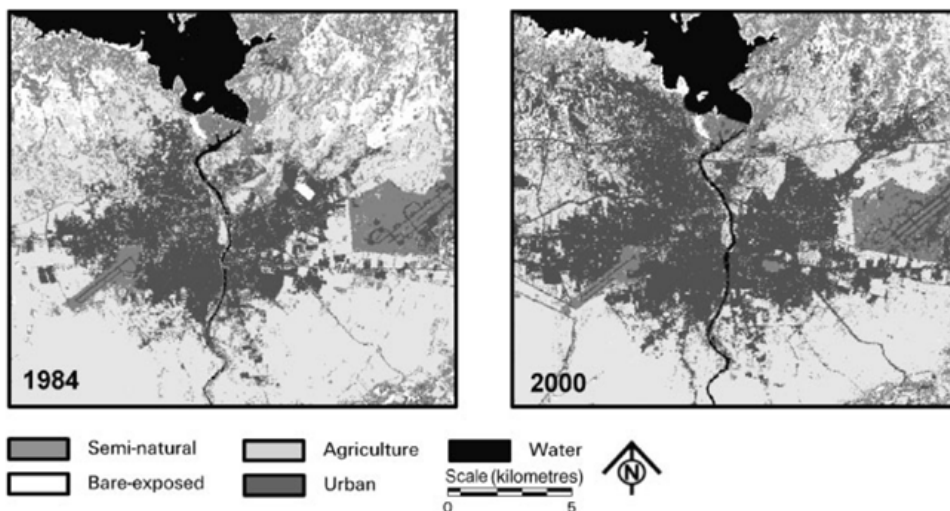
Research results suggest that similar trends and patterns are operating in those five different cities, and similar results were found in the five Western European cities studied as part of CREATE. The figure below illustrates some of the **key factors that have contributed to car-dependent developments and growing road congestion**. In most cases those factors are inter-connected and have occurred in parallel.

A **rapid urban population growth** and a **lack of planning** (land use and transport) **at the metropolitan level** has contributed to **low density developments** and **urban sprawl**, and strong car dependency.



Scope for accelerating urban mobility development processes in rapidly growing economies: cross-city comparisons
 Source: Cavoli, C. (2018), (D3.3), CREATE, Horizon 2020

Population increase in Adana
 Source: Alphan, H. (2003) Land-use change and urbanisation of Adana, Turkey. Land Degradation & Development. Vertical axis: Population; Horizontal axis: year

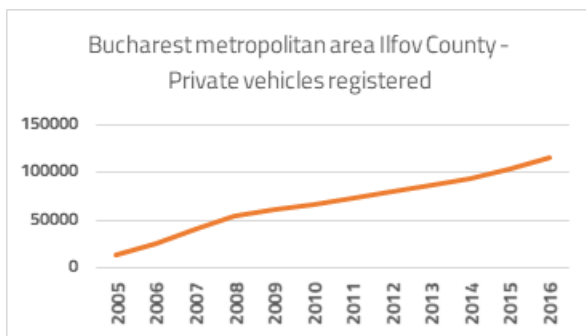


Land Use Changes in Adana. Classified images showing Land-use Land-cover categories of the study area in 1984 and 2000
 Source: Alphan, H. (2003) Land-use change and urbanisation of Adana, Turkey. Land Degradation & Development

Amman's population has almost doubled within less than a decade, growing from 2.5 million in 2010 to 4 million in 2017

Low density residential developments are built on the outskirts of cities without access to basic services and sustainable transport options

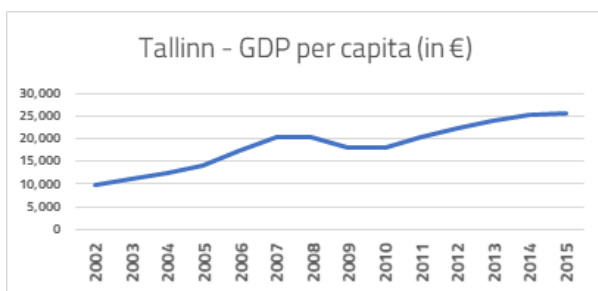
The combination of **increasing GDP** per capita and a **decrease in fuel prices** has also encouraged an **increase in car-use**. The availability of **cheaper cars** and new financial streams for their purchase has also been a contributing factor. The import of second hand vehicles started immediately after 1989 in all of the eastern European cities.



Car ownership (private car) Ilfov County (Bucharest metropolitan area), 2005-2016

Source: INS (National Institute of Statistics) data, <http://statistici.inssse.ro/shop/?lang=ro>, accessed February 2018

Bucharest's GDP per capita is the highest in Eastern Europe

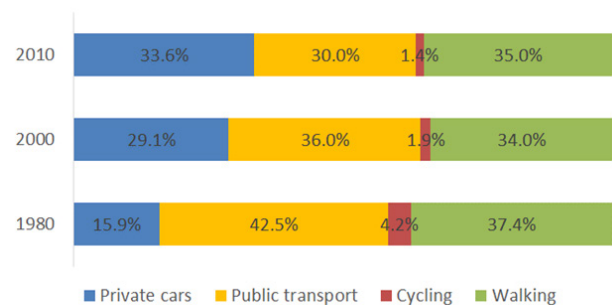


Evolution of GDP per capita in Tallinn in Euros. Vertical axis: GDP per capita in Euro, Horizontal axis: year
Source: Statistics Estonia

By investing in highway infrastructure for car use *"the government is subsidising private transport"*,

workshop participant, Amman

The **focus on road infrastructure investment**, and the **lack of investment in public transport, walking and cycling** has led to increased levels of car use and car dependency. Data indicates that modal share has shifted towards more car use and less public transport use since the 1990s.



Evolution of Modal Share in Skopje

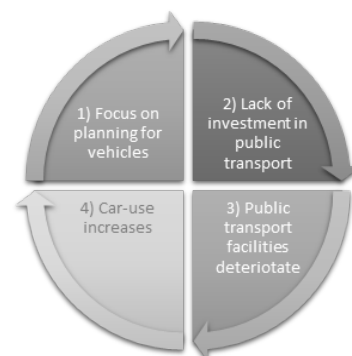
Source: Traffic studies for transport system in Skopje and Study for Development of public transport system in Skopje till 2000

Various socio-cultural and macro factors have also reinforced these processes. One of the most prominent is the association between private car ownership and freedom and/or **social status**, which has led to high car ownership and car use levels. A macro factor often mentioned is the influence of international investments and trade agreements. For instance, the access to affordable second-hand cars was facilitated by trade deals with Western European countries.

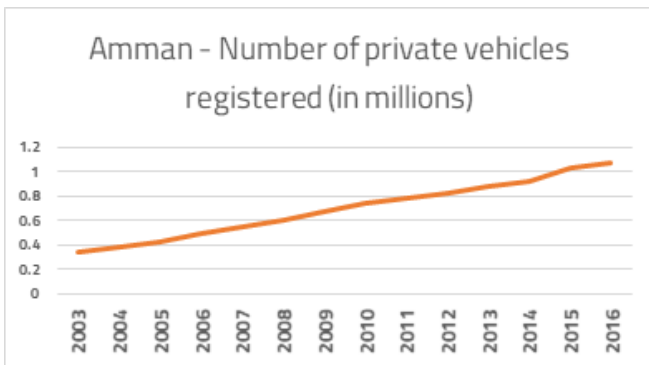
"The size of the motor vehicle corresponds to the individual's wealth"

workshop participant, Skopje

In Skopje, buying a second-hand vehicle has become particularly affordable since the late 2000s when the national government approved the import of Euro 1 & 2 second hand vehicles from Western Europe which were being removed from utilisation.



Car-oriented policies.



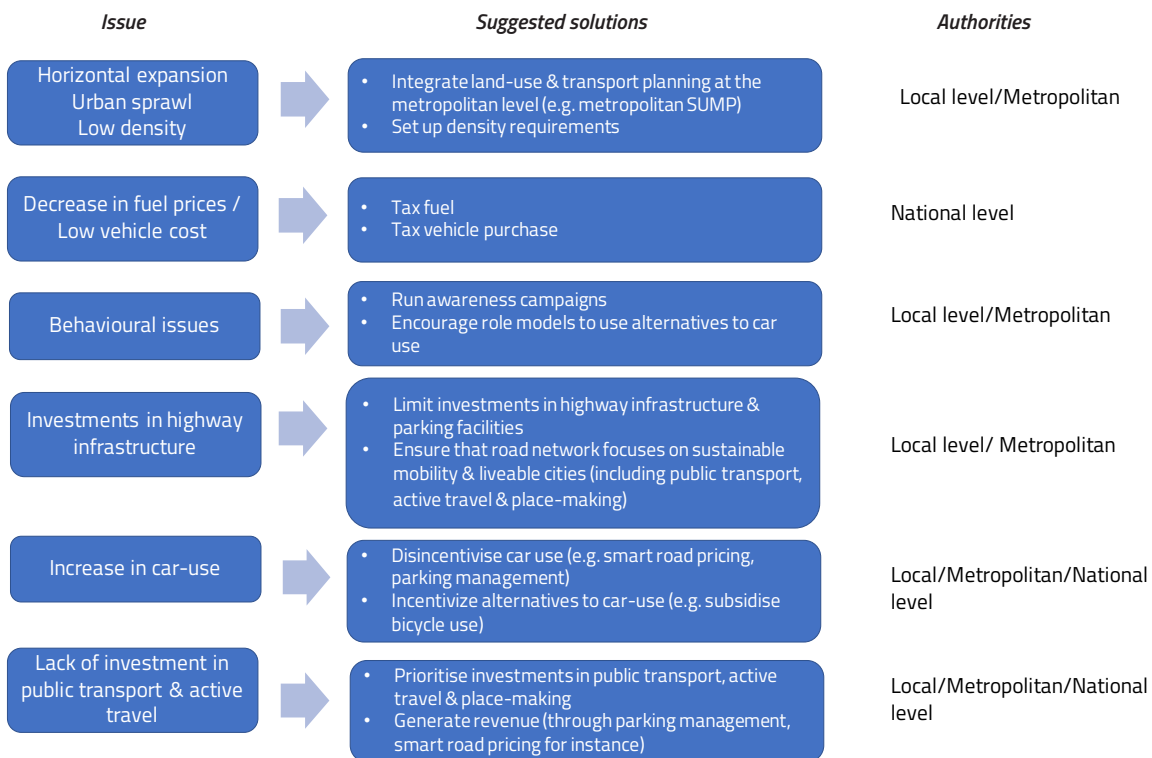
Private vehicles registered in Amman since 2002 (including cars, trucks, vans and pick-ups). Vertical axis: number of private vehicles registered in Amman (in Millions); Horizontal axis: year

Source: DoS (department of statistic), MoT (ministry of transport) and DVLD (driver & vehicle licensing department)

To what extent are these factors preventable/reversible?

Evidence suggests that economic growth can be decoupled from car use and that decreasing levels of road traffic lead to more liveable, sustainable and flourishing cities.

Potential solutions/recommendations to avoid going through a car-oriented stage include:



These solutions need to be implemented at an early stage across levels of governance and sectors.

This note reflects only the authors' view and the agency is not responsible for any use that may be made of the information it contains.

THIS SUMMARY IS BASED ON:

CAVOLI, C. (2018). SCOPE FOR ACCELERATING URBAN MOBILITY DEVELOPMENT PROCESSES IN RAPIDLY GROWING ECONOMIES: CROSS-CITY COMPARISONS (D3.3). CREATE, HORIZON 2020.



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