Understanding local disruptive policies in urban mobility: A comparison of Amsterdam, London and Munich

WORK IN PROGRESS

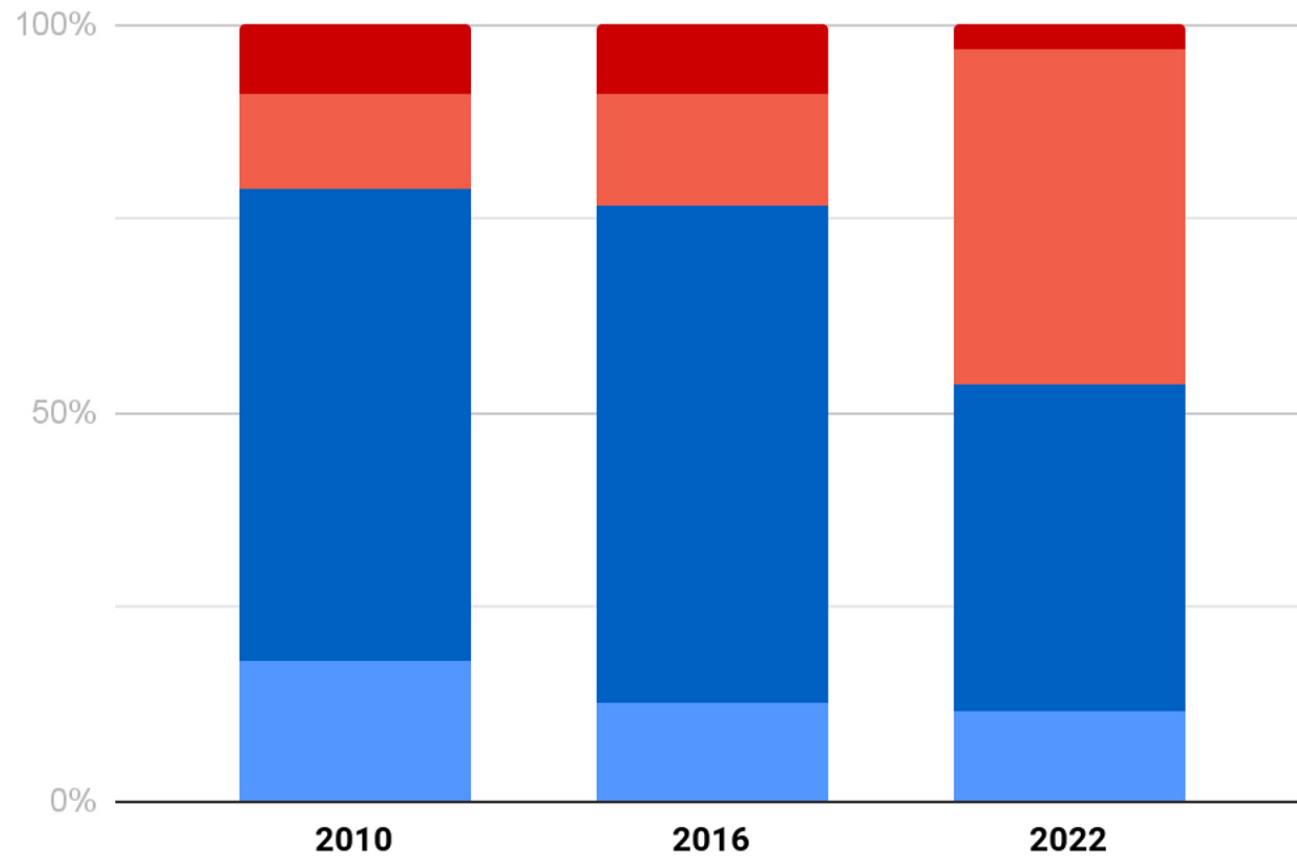Authors: Alina Weiss*, Lea Buchholz and Stefan Ćetković

*presenting

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Share of vehicle types in total number of new registrations in Munich

Sports cars, vans, other

SUVs / off−road vehicles

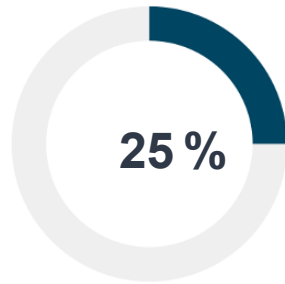Since 2010, the share of SUVs in the total number of newly registered cars has increased by 31% in Munich.

Compact, mid-range, luxury class

Minis / small cars

Source: Munich Statistical Office

TUM

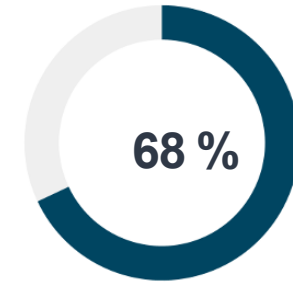# Car-ownership in Munich's households

25 %

of low-income households own at least one car

53 %
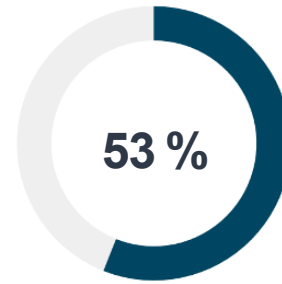
of middle-income households own at least one car

68 %

of high-income households own at least one car

People living in low-income households are less likely to have a car, yet are disproportionately affected by the negative effects of car traffic.

Source: Mobilität in Deutschland (MiD)

Literature gap

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2	**Lack of systematic understanding of car-restrictive policies**
	Emerging scholarly efforts directed towards a better understanding of car-restrictive policies and their effectiveness focus on single measures at city level (Bjerkan et al., 2021; Graaf et al., 2021; Kuss & Nicholas, 2022)

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3   **Missing focus on the local level**

Existing literature has mostly been concerned with disruptive policies aimed at socio-technical changes at national level (Ehnert et al., 2018)

Conceptualising disruptive mobility policies

Push and pull measures / Carrots and sticks
e.g. Hekler et al. 2022

Disruptive policies
e.g. Kivimaa et al. 2020

Discontinuation policies
e.g. Kungl & Geels 2018

Creative destruction as an element of policy mixes for transitions
e.g. Kivimaa & Kern 2016

Transformative innovation policies
e.g. Haddad et al. 2020

Disruptive mobility policies are defined as **rules and incentives** contributing **to reduce the relative advantage** of cars

Analytical approach:
Design features of disruptive urban mobility policies

	Feature	Description	Source
Policy strategy	**Policy objective**	Long-term objectives and quantified targets of overarching policy strategy	Rogge & Reichhardt, 2016
	Principal plans	Integration of policy instrument in policy package or reference to other policy instruments	Rogge & Reichhardt, 2016; Schaffrin et al., 2015
Policy instrument	**Target group(s)**	Target groups that receive benefits and burdens through the elements of policy design	Ingram et al., 2007; del Río, 2012; Rogge & Reichhardt, 2016
	Space	Area covered/affected by policy instrument	Aumann et al., 2023
	Time	Time scope of policy instrument's validity	del Río, 2012
	Exemptions	Selected groups exempted from policy	Pereira et al., 2016
	Compensation	Compensation of affected target group(s)	Pereira et al., 2016
	Penalties & Compliance	Sanctioning mechanism of non-compliance	Schaffrin et al., 2015

Key policy areas (Buehler et al., 2017; Thaller et al., 2019)

Urban vehicle access restrictions (UVARs)

Parking management

Inner-city speed limits

Case study selection

Munich, Germany

Amsterdam, The Netherlands

London, UK

Results (1): Cross-city comparison for all policy areas

- **Policy strategy:**

  - All three local governments want to achieve range of sustainability goals that with their transport strategies and policies (*policy objective*)

  - Objectives for reducing cars are not communicated (*policy objective*)

  - Most comprehensive plans in AMS and disruptive policies embedded in long-term strategies in both AMS and LDN compared to MUC (*principal plans*)

- **Policy instruments:**

  - LDN targets most varied groups / types of cars

  - Most exemptions in MUC

  - AMS and LDN have the relatively largest spatial scope of their disruptive policies

Results (2): Disruptive?

(Ultra-)-Low-Emission-Zons	Parking management	Inner-city speed limits
ULEZs are disruptive for certain diesel vehicles, yet, exceptions limit policy effectiveness.	Focus of parking management on the efficient use of space. Unintentionally disruptive effect, for example, when parking spaces are reduced annually or different prices apply for combustion and electric cars.	In all three cities, the strategic focus when introducing a 30 km/h speed limit is on maintaining traffic flow, meaning not intended to be disruptive.

Conclusion

- Conceptualisation helps to better understand the policy design of the emerging number and nature of disruptive policies

- Analytical framework is valuable for identifying the strengths and weaknesses of each city's policy approach to disruptive mobility policies

- For the selected policy areas (ULEZs, parking, speed limits): Munich appears as laggard compared to Amsterdam and London

Discussion

- Extend types of selected policies, e.g. the removal of cycle paths often also leads to the conversion of car lanes

- Common focus on policy (what it is and should be) → instead, understand politics (e.g. influence of actors and institutions) that make the adoption of such policies likely essential for understanding sustainability transitions (Meadowcroft, 2011)

- Importance of communicating disruptive plans in advance

- Differences in cities' agency in multi-level governance contexts to be included (e.g. parking policy in Munich hampered by Bavarian level; parking policy in London each borough's responsibility)

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Results: Policy design of (Ultra-)Low-Emission-Zones

Policy objective
- Improving air quality (all)
- Long-term: AMS & LON strive to comply with emission standards four times higher than MUC.

Principal plans
- 2008 EU Directive on Clean Air stimulated introduction of local clean air plans (all)
- (U)LEZs part of broader clean air plans (all) with long-term vision and more measures (AMS, LON)

Target group(s)
- Diesel cars (all) and petrol cars (LON)
- Access restriction: 1) LON 2) MUC 3) AMS (from strongest to weakest)
- Extension of targeted groups: planned (MUC & AMS)

Space
- Spatial scope of (U)LEZs: inner city (all)
- Planned expansion to whole city (AMS, LON)

Time
- No time restrictions (all)

Exemptions
- Certain vehicle (e.g. vintage cars) and social groups (vehicles of disabled people)
- Special permits per day (LON, AMS) or year (MUC)
- MUC: most exceptions and lowest costs for special permits

Compensation
- Purchase subsidy linked to LEZ and mobility options (AMS) or independent from LEZ and linked to other vehicle types(MUC)
- Demolition subsidy: Schemes to encourare scrapping diesel cars targeted by LEZ (AMS, LON)

Penalties & Compliance
- Similar prices for violations (all)
- Monitoring of compliance (all); camera surveillance (LON, AMS)