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Track access charges in Central Europe

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Introduction

- **Examines** Austria, Czechia, Slovakia, Hungary, Poland, and Slovenia as case countries
- **Analyses** TAC structures, underlying charging principles, and key policy implications
- **Explores** how funding approaches and regulatory priorities shape national TAC systems
- **Fills** research gap by extending TAC analysis beyond Western European contexts

Objectives

- Provide **descriptive analysis** of TAC across six selected Central European countries
- **Benchmark** findings against Western European charging models and practices
- Conduct **sensitivity analysis** to understand underlying logic of TAC structures
- Discuss **policy implications** for competition, funding, and cross-border rail flows

Theoretical Background

- TAC uneasy **balance** between marginal cost efficiency and full cost recovery objectives
- TAC i**nfluence** demand, subsidies, and network usage efficiency
- **Trade-off** exists between cost recovery and promoting open access competition

Literature Insights

- **Diversity & Evolution:** Large cross-country variation shaped by cost recovery, subsidies, and institutions (Nash 2005; Ait Ali & Eliasson 2022).
- **Cost Principles:** MC-based systems promote efficiency but under-recover; FC-based secure funding but risk inefficiency.
- **Traffic Density:** High charges reduce frequency and demand; capacity pricing may raise efficiency (Olarte-Bacares 2022; Beria 2024).
- **Competition:** Higher TAC blocks entry, but demand and slot allocation are stronger barriers (Crozet & Chassagne 2013).

Central Europe – network statistics

	AT	CZ	HU	PL	SK	SI
Network usage density for freight services (trains per day per route km)	25	10	7	12	11	26
Network usage density for passenger services (trains per day per route km)	64	41	35	27	30	26
Network usage density for total services (trains per day per route km)	89	51	42	39	41	52
Total rail traffic (million train-km)	183	177	114	275	54	23

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TAC in Central Europe

	AT	CZ	PL	SK	HU	SI
PASSENGER (€/train-km, averages)	1,36	0,61	1,40	1,48	1,19	0,68
FREIGHT (€/train-km, averages)	1,92	1,61	2,83	3,12	2,22	0,73

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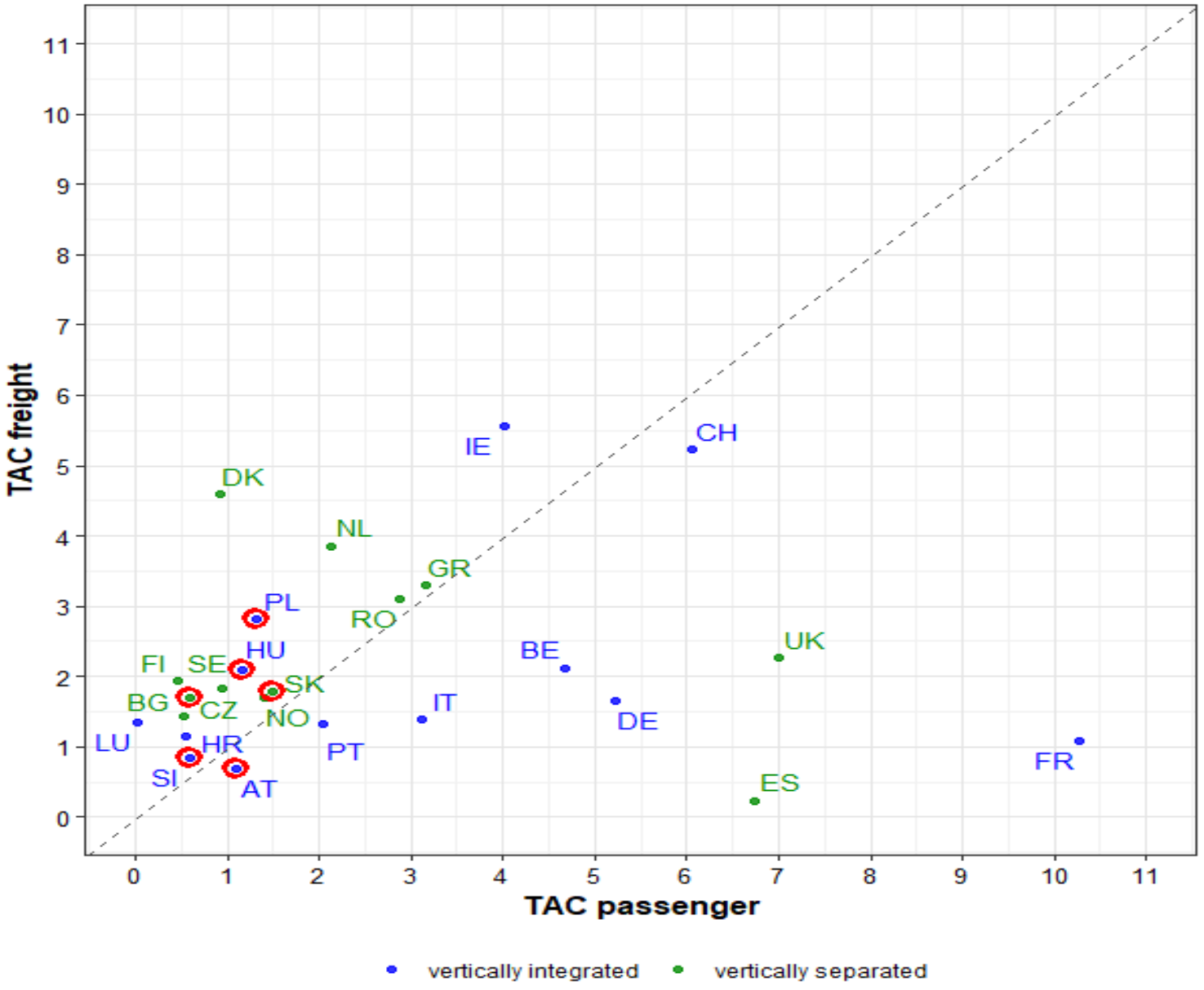

Unit: EUR/trainkm

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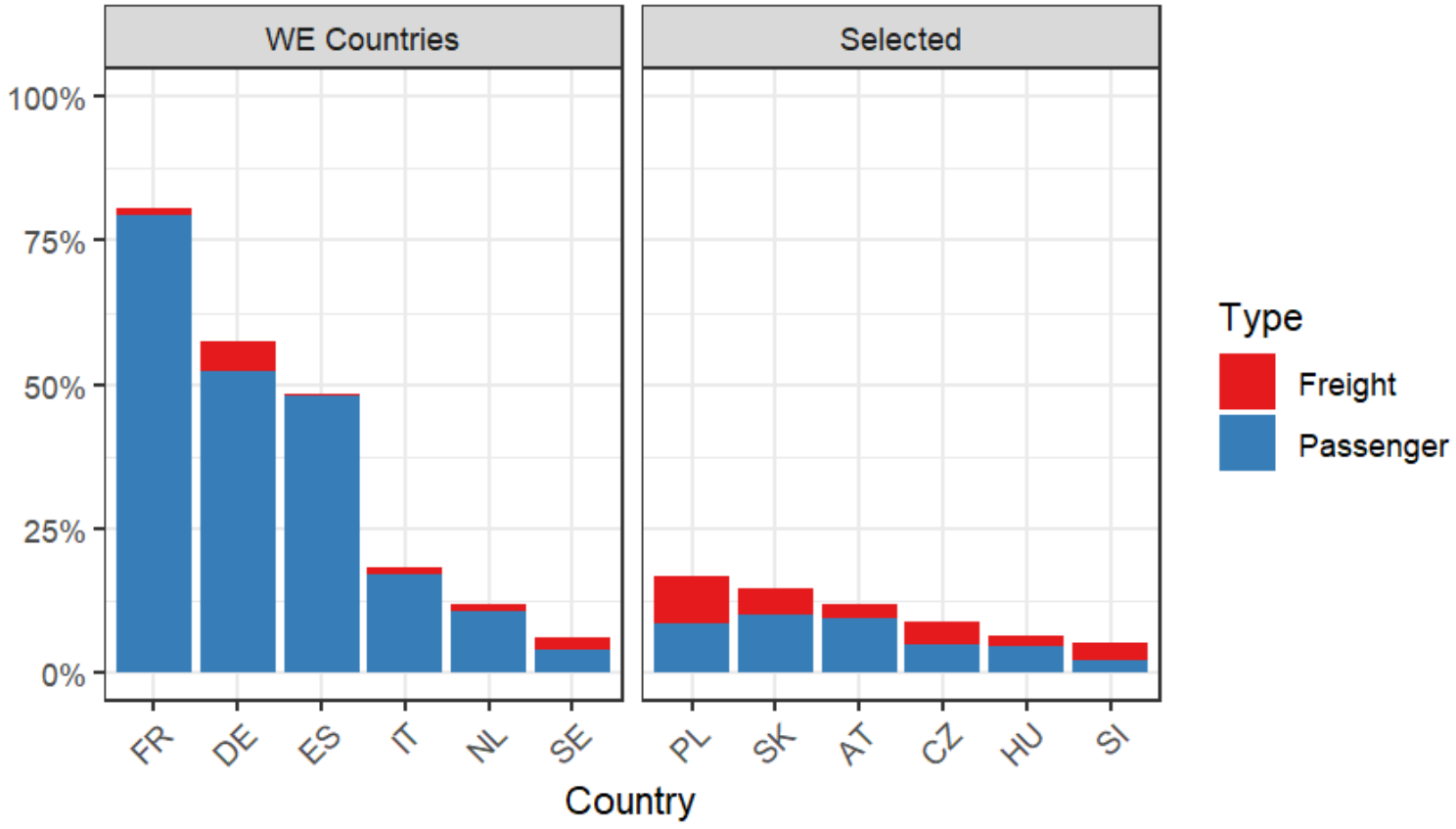
Share of TAC in IM expenditure



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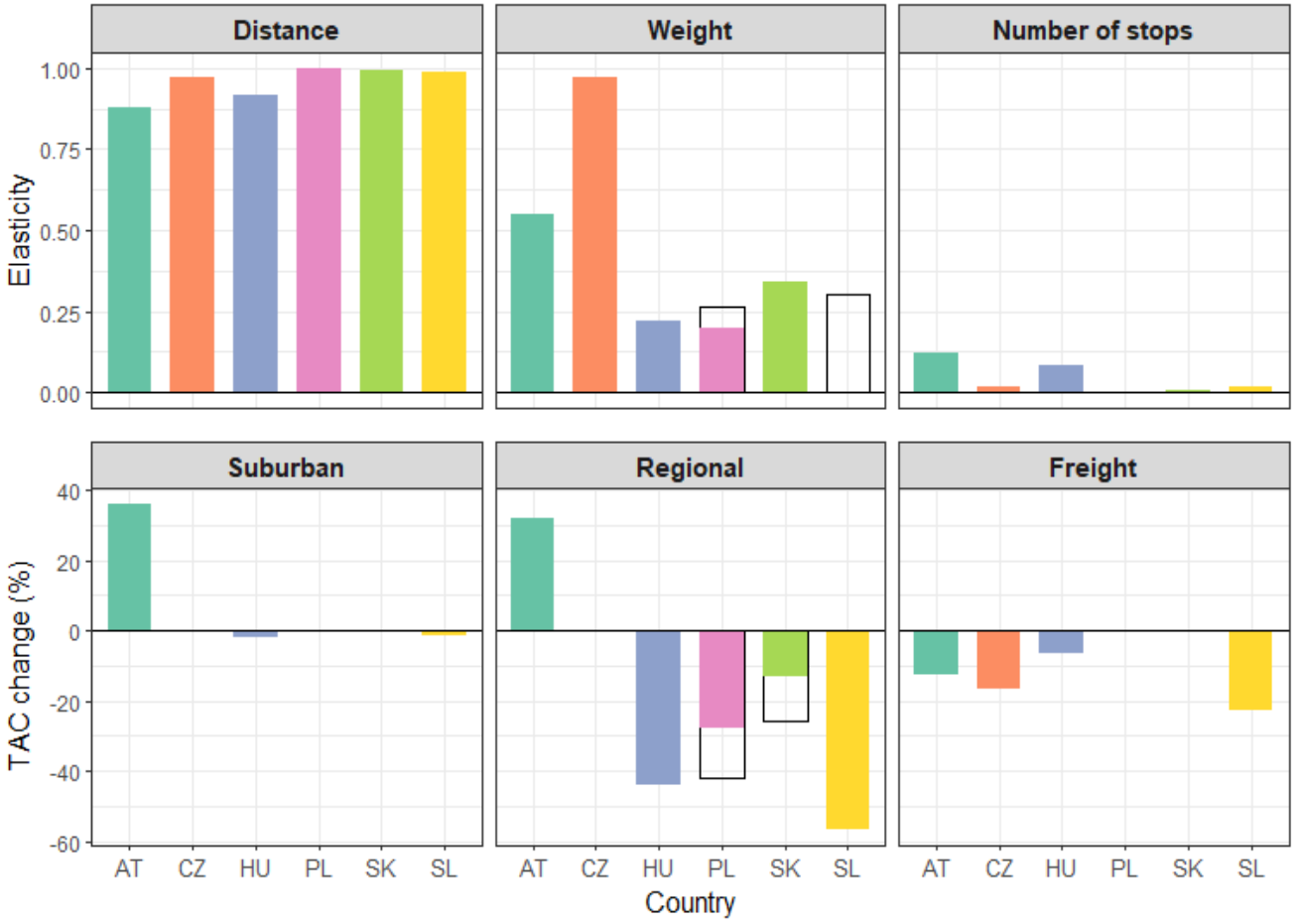
Why are TAC charges lower in CE?

- **Market Size:** Small domestic markets → rely on cross-border traffic; lower TAC attracts freight & passengers.
- **Policy Shifts:** Post-communist states reduced high freight TAC after 2008 crisis to stay competitive.
- **Competition:** Low passenger TAC supports affordability and open-access entry, fostering stronger competition.
- **No High-Speed Rail:** Absence of HSR moderates charges; no full-cost recovery needed, services can't sustain high TAC.

Sensitivity Analysis



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Policy Implications

- **Funding gap**: Low TAC stimulates traffic but strains budgets; AT ensures stable investment, CEE lags.
- **Policy trade-offs:** Low TAC boosts competition but risks congestion, and poor cost recovery.
- **Cross-border dependence**: Significant international flows → motivation for lower TAC
- **Freight/Passenger TAC evolution**: Initially high freight TAC cross-subsidized passengers; later reduced

Conclusions

- **Central Europe** has significantly lower TAC than Western Europe
- **Lower charges** foster competition, affordability, and freight revival in railways
- **Weak cost recovery** creates major financial sustainability challenges for infrastructure managers
- **Good policy making** requires balancing efficiency, competition, and stable funding models