

The Effects of Metro Systems in the GCC

Mallooki | Purdue urban economics course project | Public work sample brief

This public brief summarizes a comparative urban economics project on metro systems in Doha and Riyadh. The project asks how rail investment can shift travel behavior away from private cars in Gulf cities, and which policy conditions make that shift more or less plausible.

RESEARCH QUESTION

- How can metro systems in Doha and Riyadh shift travel behavior away from private cars?
- Which access, pricing, land-use, climate, and behavior barriers limit that shift?

APPROACH

- Synthesized transport economics literature on Doha and Riyadh rather than treating metro construction as a single infrastructure fix.
- Separated hard barriers, such as first/last-mile access and bus integration, from soft barriers, such as comfort, status, habit, and perceived convenience.
- Connected mode choice to economic tradeoffs: time, price, reliability, walking conditions, and the relative utility of private and public transport.

EVIDENCE AND FINDINGS

- The Doha and Riyadh cases suggest that rail can reduce congestion, emissions, and car dependence when it is paired with feeder transit and practical access to final destinations.
- Metro capacity alone is not enough. Parking policy, fuel-price policy, shaded pedestrian infrastructure, reliability, and public perception shape whether households switch modes.
- For Kuwait and Bahrain, the regional lesson should be read as policy inference rather than direct empirical evidence.

LIMITS

- The project includes no original empirical estimation; it relies on literature, projected effects, and stated-preference or adoption evidence.
- The literature does not fully agree on which demographic predictors matter most for metro adoption.

SKILLS SHOWN

- Urban economics framing, literature synthesis, policy comparison, externalities analysis, and clear presentation of transport tradeoffs in GCC cities.

PUBLIC NOTE

- This is a public brief based on the project. The original class submission remains private for privacy reasons.