

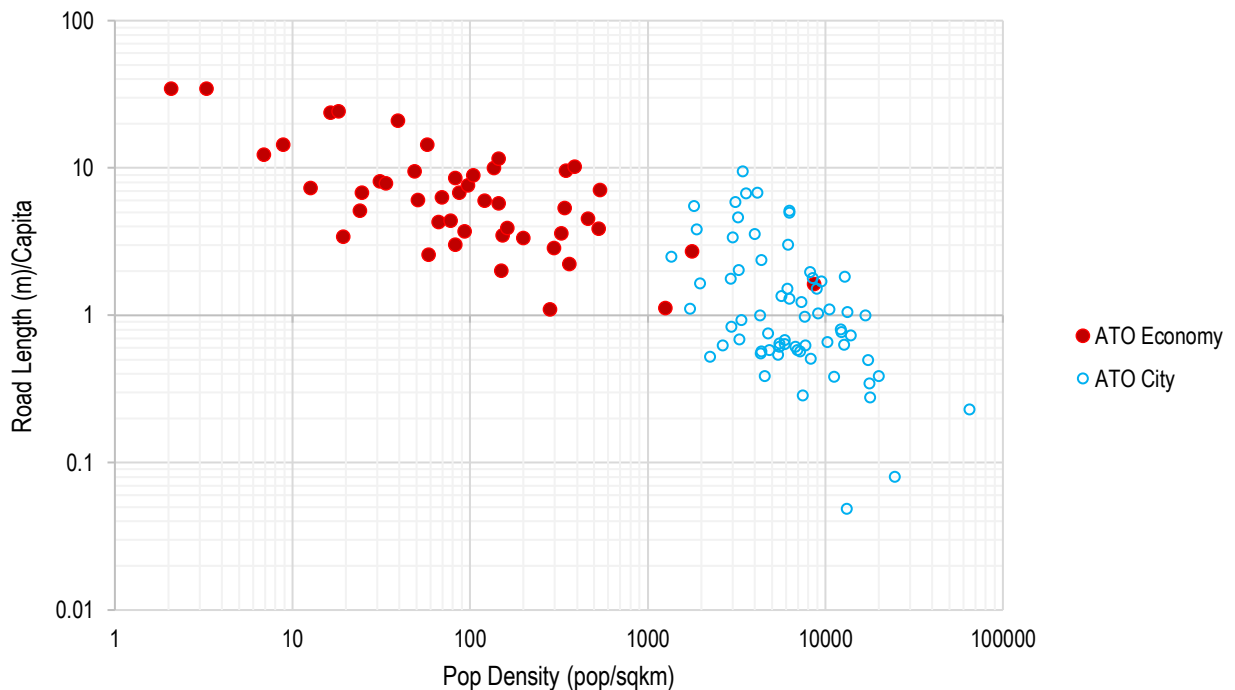
# Asian Transport Outlook (ATO)

## What is the Status of Urban Transport Access in Asia?

Poor access to economic and social opportunities in cities is a significant barrier to socio-economic development of cities. Target 11.2 of the Sustainable Development Goals states: "by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons". SDG Target 11.2 has as its defined indicator: "Proportion of population that has convenient access to public transport by sex, age, and persons with disabilities". The urban access indicator will be explored in a more comprehensive manner in the next phase of ATO, however, considering the importance of urban access, a few indicators related to urban access are already considered in this phase. In the current version of the ATO, access to roads, travel time, street sprawl and rapid transit availability are considered as proxy indicators for urban transport access.

In the ATO economies, urban residents have comparatively better access to road infrastructure and transport services mainly due to high urban population density (Fig. 1). However, overall, there is a significant disparity among economies regarding urban access when measured in travel time, urban sprawl, access to public transit etc.

**Figure 1: Road Length per Capita and Population Density, Selected ATO Economies and ATO Cities**

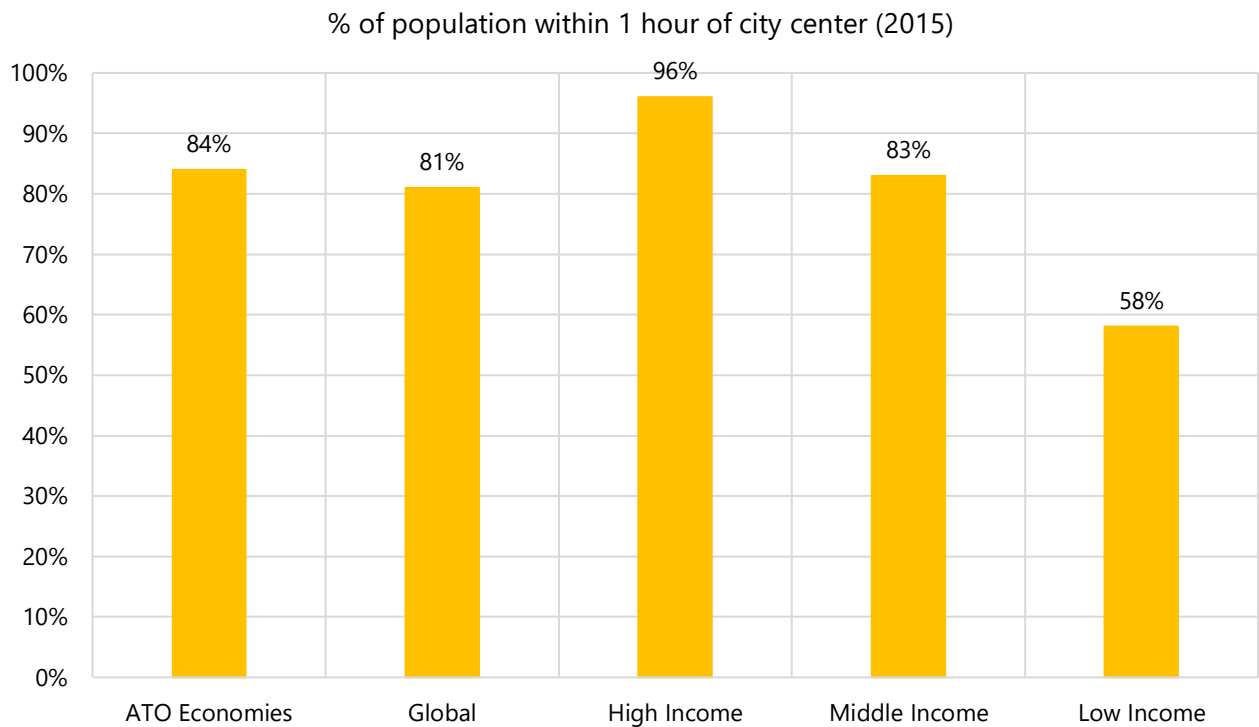


Source: <https://iopscience.iop.org/article/10.1088/1748-9326/ab22c7#erlab22c7s3>,  
[https://publications.jrc.ec.europa.eu/repository/bitstream/JRC115586/ghs\\_stat\\_ucdb2015mt\\_globe\\_r2019a\\_v1\\_0\\_web\\_1.pdf](https://publications.jrc.ec.europa.eu/repository/bitstream/JRC115586/ghs_stat_ucdb2015mt_globe_r2019a_v1_0_web_1.pdf)

ATO Data Used - INF-TTI-005(3)

When urban access is measured through travel time, ATO economies demonstrate a significant disparity in accessibility<sup>1</sup> relative to income levels. In high, middle and low-income ATO economies, 96%, 83% and 58% of the population reside within an hour of a city.

Figure 2: Percentage of Population within 1 Hour of City Center by Income Group



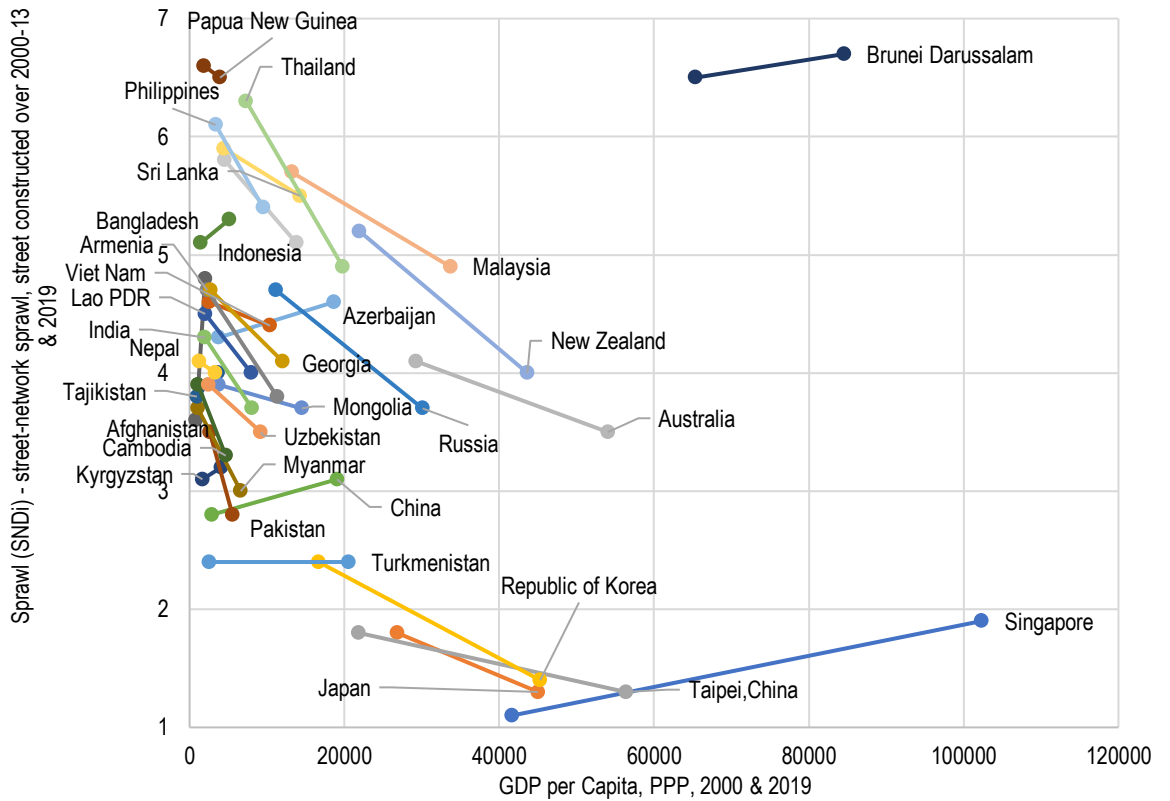
Source: <https://www.nature.com/articles/nature25181#Sec11>

ATO Data Used: ACC-UAC-001

Urban accessibility is also dependent on the typology of the road network and its potential to induce street sprawl. Street sprawl is a pattern of road development that causes a decrease in .access, i.e., road connections resulting in dead ends or greater distances between intersections resulting in higher driving, trip lengths and reducing the viability of transit operations. In terms of sprawl, between 2000 and 2013 nearly 70% of the ATO economies have reduced construction related street-network sprawl thereby improving urban access (Fig 3.). Comparing road construction from 1990 to 1999 and 2000 to 2013, only 36% of the ATO economies have reduced street-network sprawl. Overall, since 2013, urban transport investments on roads did reduce street-network sprawl in the ATO economies.

<sup>1</sup> Urban access depends on several factors – transport infrastructure and services, distance and spatial distribution of cities.

**Figure 3: Street Network Sprawl (2000-2013, 2019) and GDP per Capita**

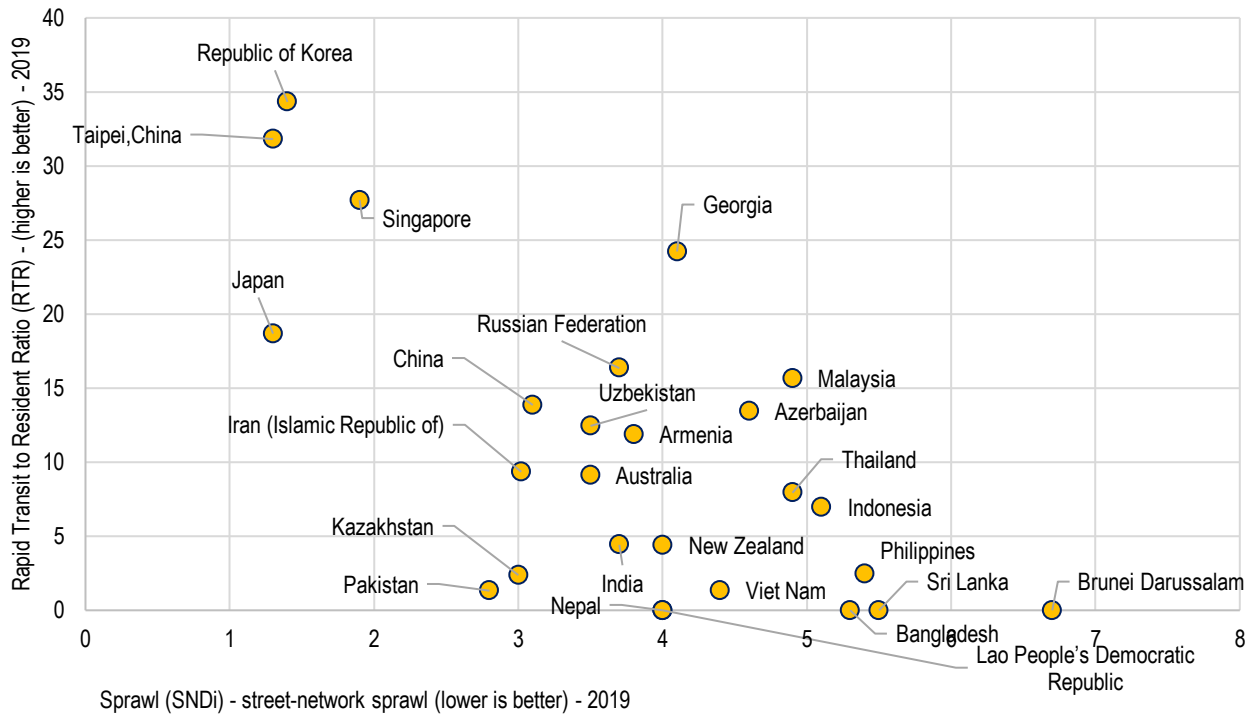


Source: Christopher Barrington-Leigh & Adam Millard-Ball (Sprawl (SNDi)),

ATO Data Used - ACC-UAC-003

For the ATO economies, the street sprawl indicator also correlates with provision of rapid transit services (BRT, Metro and LRT), i.e., limited access to quality transit services. However, since 1990, nearly 10,000 km of rapid transit has been added in the ATO economies. In contrast, bus registrations have grown significantly slower than private transport modes in several of the ATO economies.

**Figure 4: Street Network Sprawl and Access to Rapid Transit**



Source: ITDP (Rapid Transit to Resident Ratio), Christopher Barrington-Leigh & Adam Millard-Ball (Sprawl (SNDi))

ATO Data Used: ACC-UAC-002, ACC-UAC-003