



TBILISI, GEORGIA

URBAN TRANSPORT PROFILE

December 2024

Summary

Tbilisi, the capital of Georgia, is an urban centre of nearly 1 million people and a significant economic hub, generating 70% of the nation's GDP. Despite a stable population density of 7,000 persons per sq km between 2000 and 2020, the city has seen its built-up area expand, with a per capita increase from 31 to 36 sq km. This growth has been accompanied by a rise in GDP per capita, from \$2,000 to \$5,000 between 2000 and 2015. Tbilisi boasts a well-established metro system, with 28 kilometers of rapid transit lines contributing to a high public transport accessibility rate of 47%, exceeding the Central and West Asia average of 22%. However, road infrastructure remains limited compared to the national average, with only 2 kilometers of road per thousand capita.

While Tbilisi's metro system provides a strong foundation for public transport, private vehicle use remains prevalent, accounting for 52% of trips according to the Google Environmental Explorer (2023). With 536 vehicles per thousand residents, managing traffic congestion and promoting sustainable transport options are key challenges. The city has made progress in improving urban access, with 70% of residents having access to healthcare and schools, and 40% enjoying access to car-free zones. Furthermore, Tbilisi has ambitious plans for expanding its cycling network, aiming to develop 240 km of bicycle paths in the long term. Balancing these initiatives with efforts to modernize its existing metro system will be crucial in ensuring a sustainable and efficient urban transport network for Tbilisi's future.

About the Urban Transport Profiles

The Asian Transport Observatory (ATO) Urban Transport Profiles provide a comprehensive snapshot of urban transport dynamics for 40 cities in the Asia-Pacific region. These profiles compile data from official city reports, relevant sources from reputable research organizations, multilateral development institutions, international experts' reports, secondary studies, and all other research endorsed or guided by city governments. Featured cities are benchmarked against other cities, where data is available, in the region, subregional averages — and in some cases, global cities — offering valuable comparative insights. In cases where data is not available, placeholders for the graphs are retained. Each profile also includes a curated list of relevant urban transport policies and documents, presenting a concise overview of the city's policy framework. By covering a wide range of transport-related indicators, these profiles serve as a critical resource for understanding and improving urban transport systems.

Disclaimer

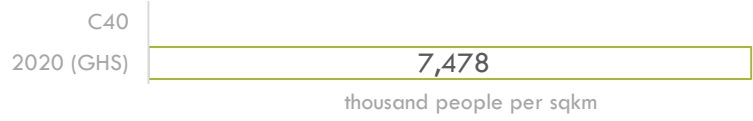
The Asian Transport Observatory (ATO) project collects, collates, and organizes data from publicly available official, as well as reputable and peer-reviewed secondary sources, which may contain incomplete or inconsistent data. It is important to note that the ATO does not generate data. Moreover, while the ATO carries out quality control and assurance of whether the data are truthfully reflected in the ATO, the ATO does not make any warranties or representations as to the appropriateness, quality, accuracy, or completeness of the data in the ATO databases, and in the knowledge products that are produced from such. Users are encouraged to scrutinize, verify, interpret, and judge the data before utilizing them.

General

Population 987 thousand
(2020) (GHS)

Population density

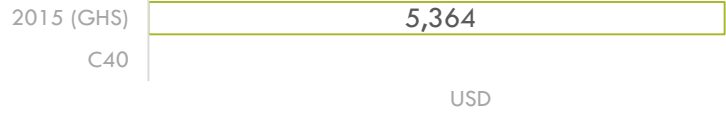
Land area 246 sqkm
(2016) (Oke et.al. (2019) (Demographia))



Population density 7 thousand per sqkm
(2020) (GHS)

GDP per capita

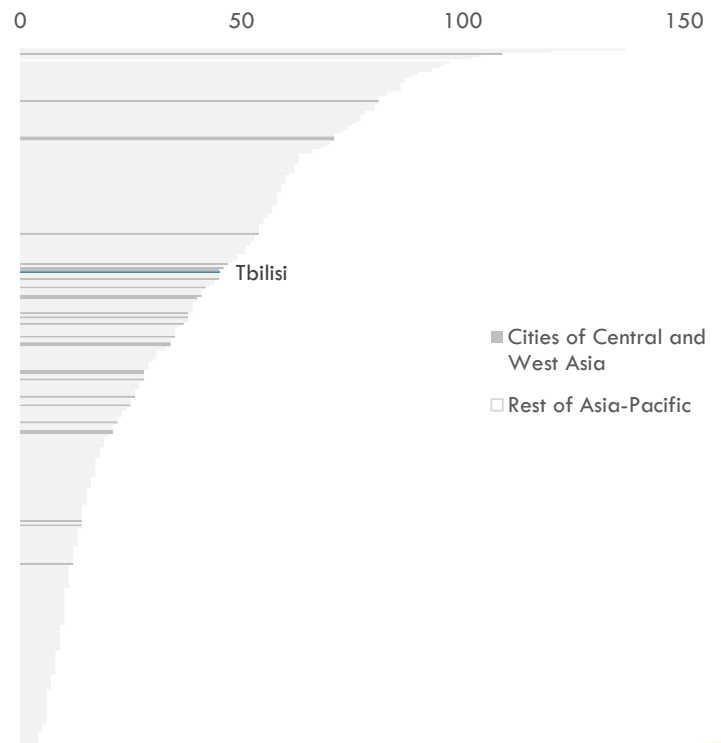
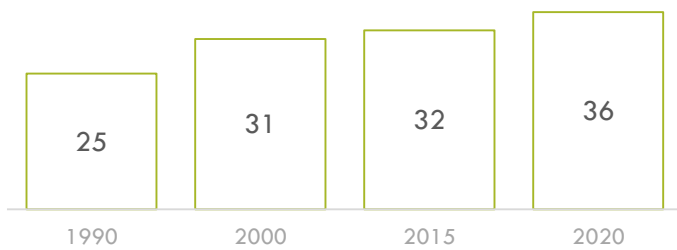
GDP per capita 5 thousand USD
(2015) (GHS)



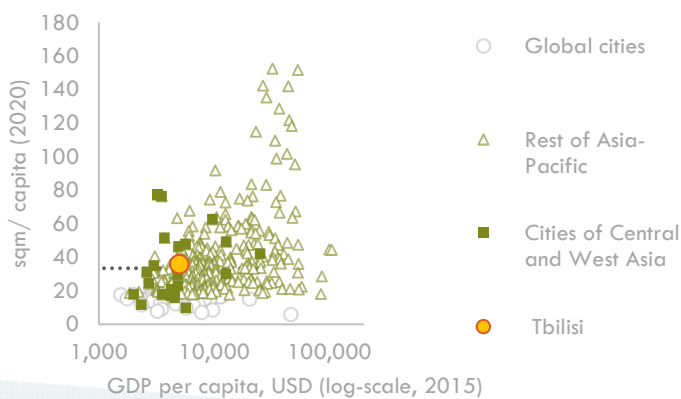
Urban Form and Structure

Builtup area per capita
sqm per capita (GHS)

Mean block density
blocks per sqkm (2020) (ITDP)

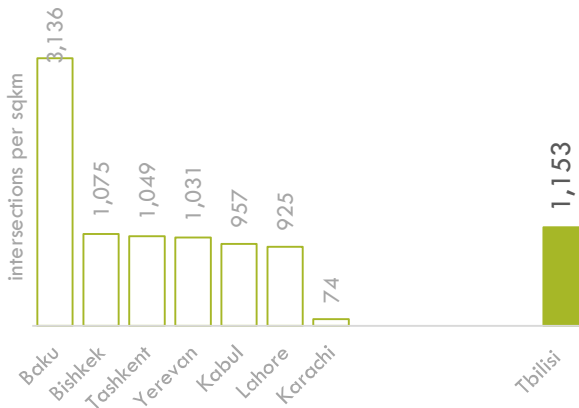


Builtup area per capita
(GHS)



Intersection density

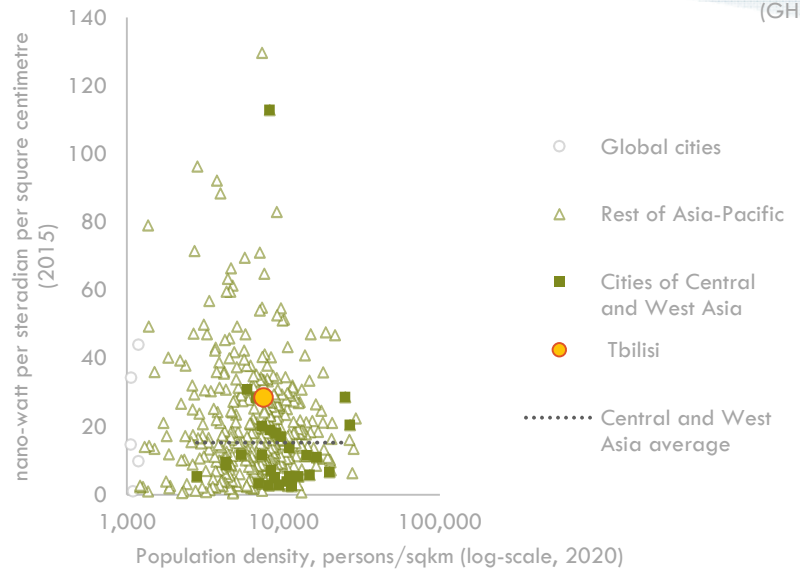
(Oke et.al. (2019) (OSM))



(a) Night time light intensity studies illustrate urban forms and patterns by mapping human activity, infrastructure, and connectivity, offering insights into urban sprawl, density variations, and transport network

Night time light intensity (a)

(GHS)



Urban Transport Infrastructure

Road availability

kilometers per thousand population (2019) (Oke et.al. (OSM) and GHS)



Road kilometers 2,900 kilometers

(2015) (Primary data)

Rapid transit infrastructure

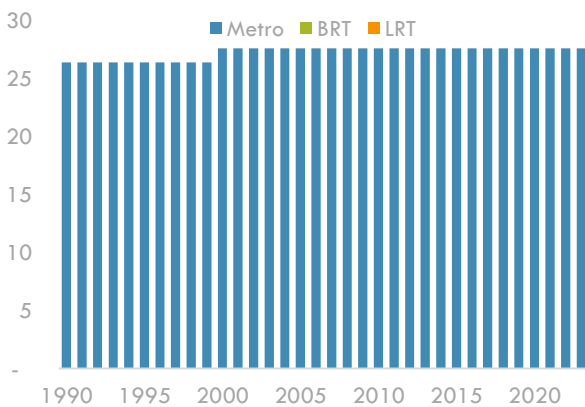
(2024) (TE)

■ Under construction ■ Planned

BRT LRT Metro

Rapid transit infrastructure

kilometers (ITDP, Primary data)

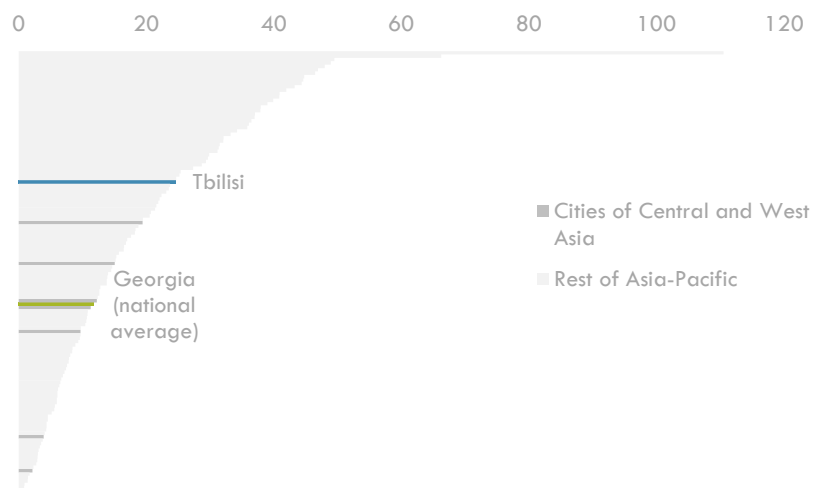


BRT none
LRT none
Metro 28 kilometers
Total 28 kilometers

(2023) (ITDP)

Rapid transit availability

kilometers per million urban population (2021) (ITDP, Primary data)



Approximate transit coverage 42% of land area

(2015) (ITDP and GHS)

Transport Activity and Services

VKT per capita

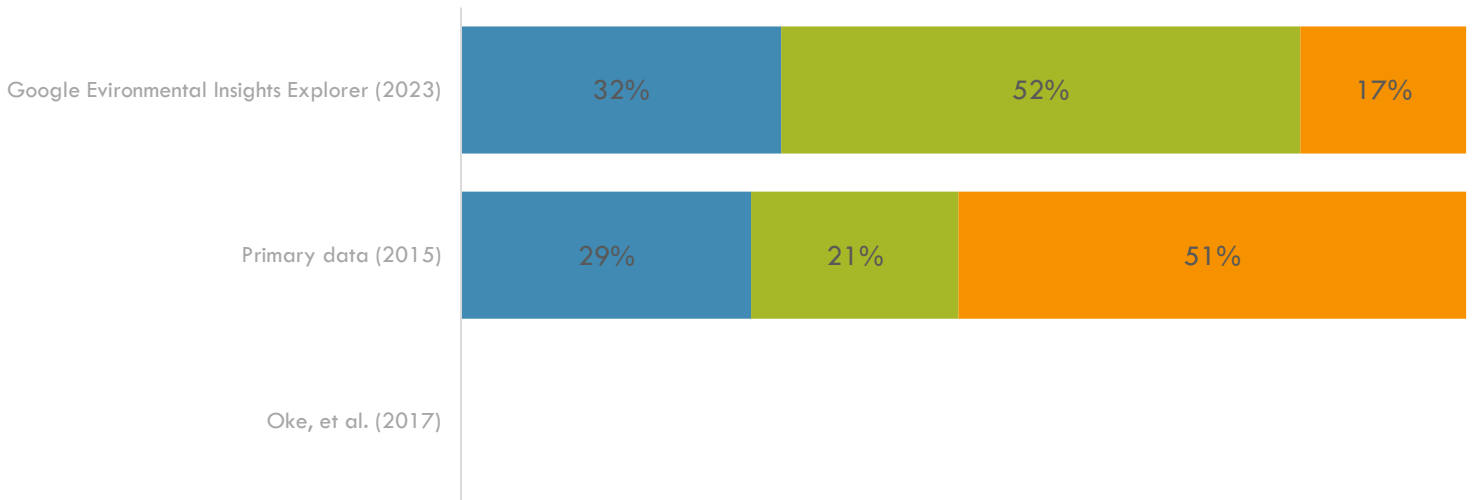
Vehicle-kilometer per capita (2022) (ClimateTrace)



Trips Mode share (b)

Share, %

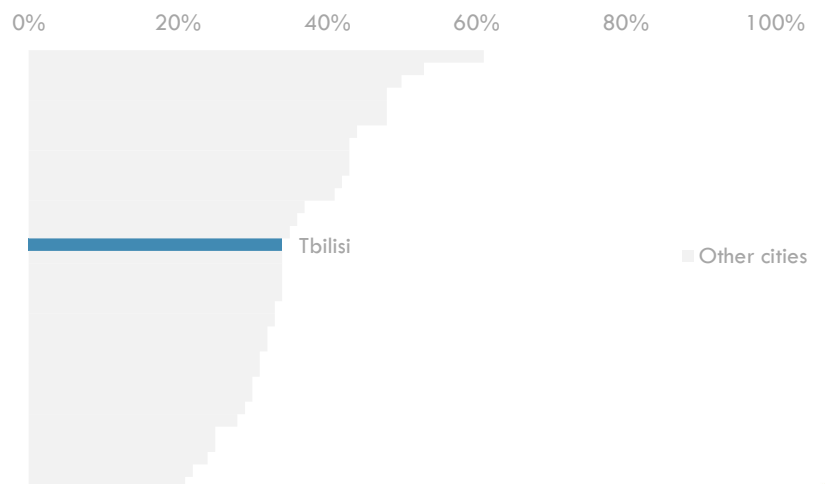
■ Walking and cycling ■ Private ■ Public transport (bus, ferry, informal public transit, etc)



(b) The methodologies used for mode share assessments vary across different studies, making direct comparison of results inadvisable. Specifically, the Google Environmental Insights Explorer derives its assessments from mobile data analysis, while primary data studies typically rely on survey-based approaches. In contrast, the study by Oke et al. utilizes a combination of secondary data sources.

Congestion level

Percent increased travel time vs. uncongested conditions (2021) (TomTom)

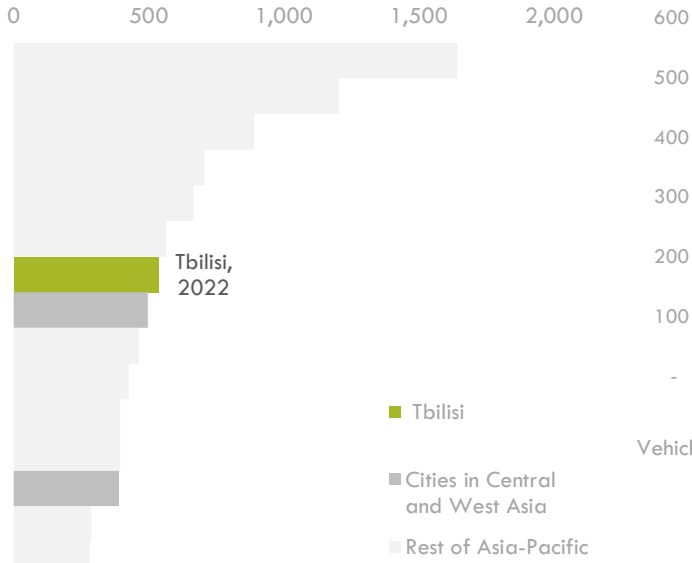


Metro ridership n.d.

Congestion ranking n.d.

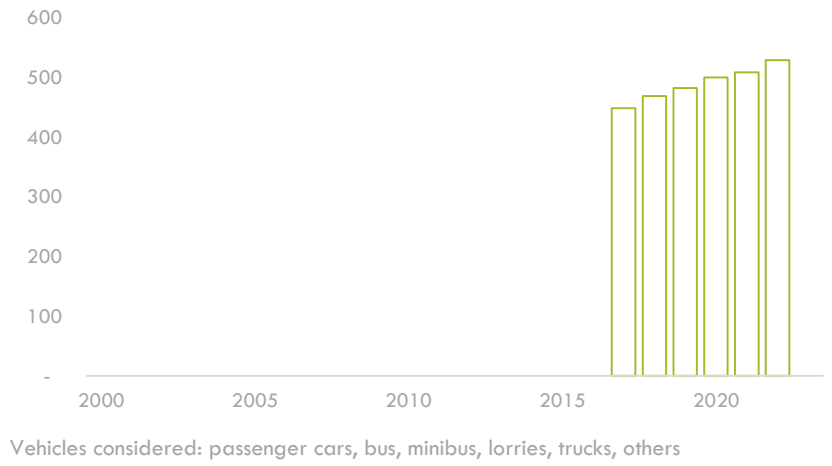
Vehicle motorization

Vehicles per thousand population (Primary data)



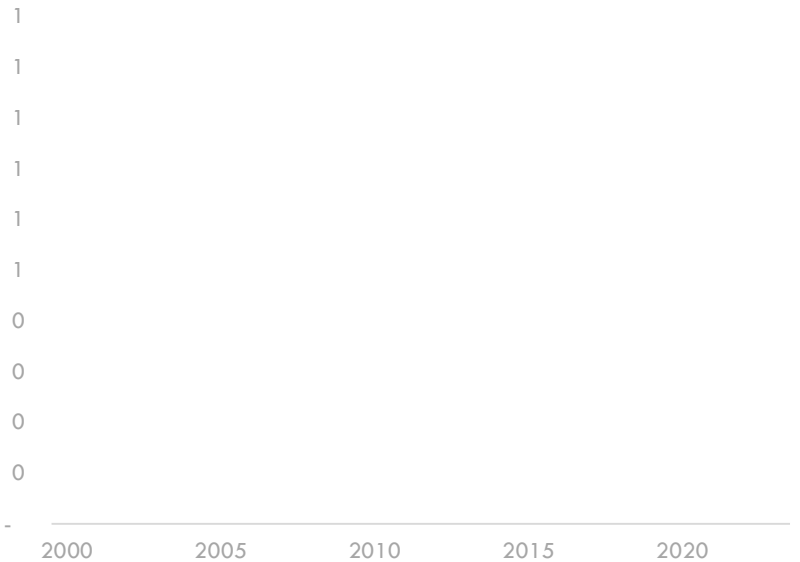
Vehicles registered (c)

Thousand vehicles (Primary data)



Bus fleet (operational)

Bus (and other public transport) fleet (Primary data)

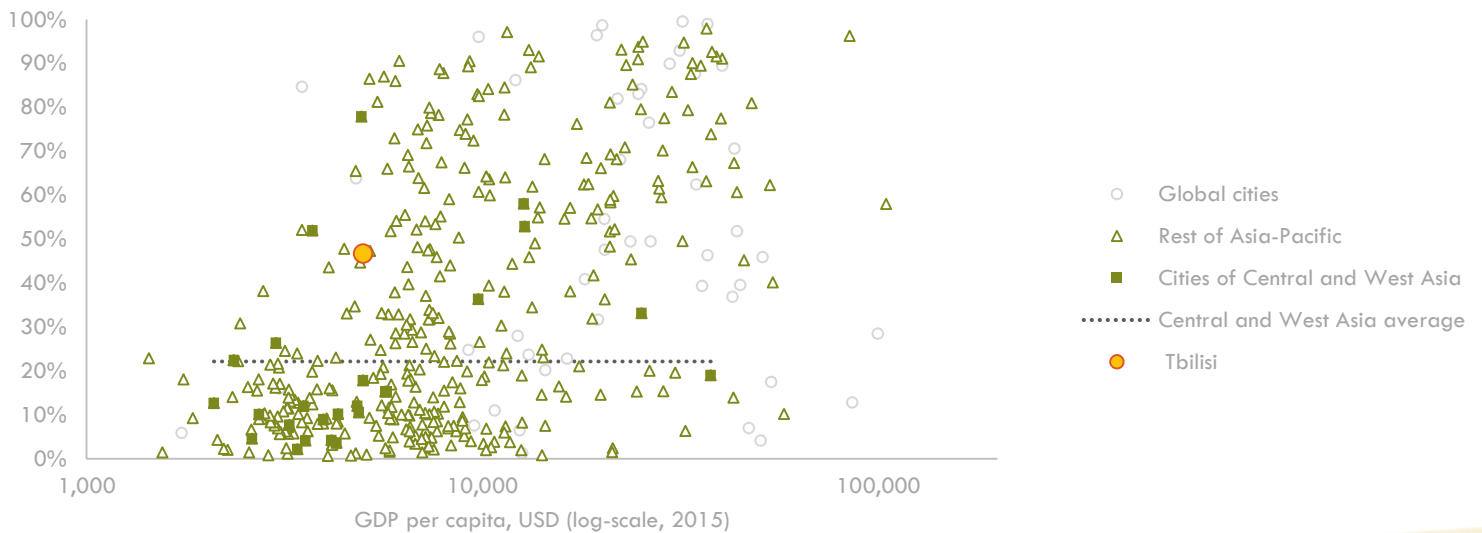


(c) It should be noted that, in most cases, scrapped vehicles are not de-registered, which may result in slightly inflated numbers.

Urban Access

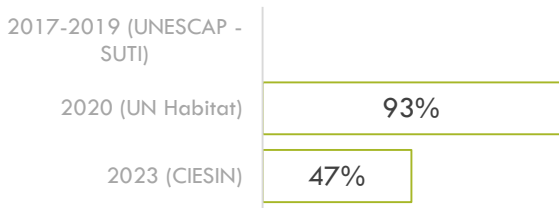
Access to urban public transport

Share of population with convenient access to public transport (2023) (CIESIN)



Access to urban public transport (d) - by source

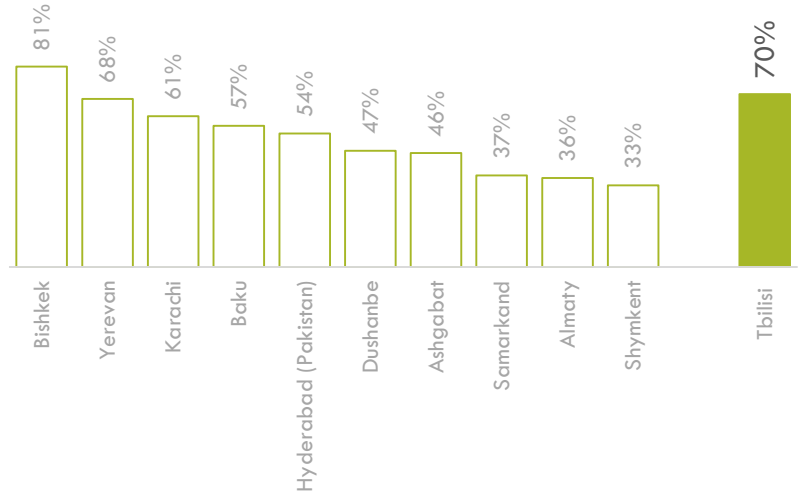
Share of population with convenient access to public transport



(d) "Access to urban public transport" is computed as share of population who live within a walking distance (along a street network) of 500m to a low capacity public transport system (eg bus, tram) and 1000m to a high capacity public transport system (eg trains, ferries, etc). Only public transport stops which are mapped are included in the analysis which may include both formal and informal stops. Many cities (mostly in the developing countries) have informal public transport systems which are not fully mapped - meaning that they may record higher levels of access to public transport than reported in this dataset.

People near services (both healthcare and schools) (e)

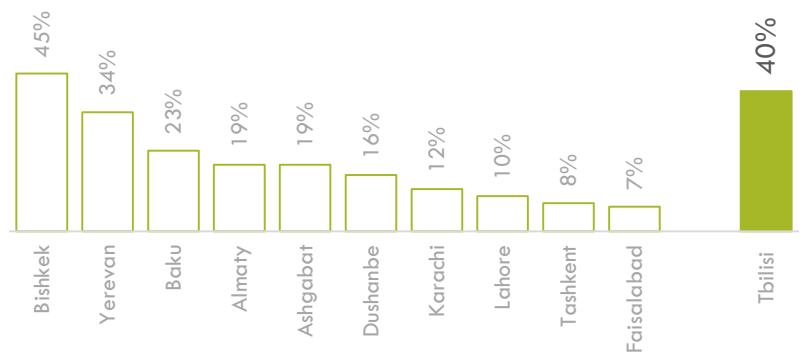
(Share of population) vs. highest 10 cities in Central and West Asia (2020) (ITDP)



(e) People Near Services measures the percentage of the city's population living within a 1km walk of both healthcare and education. These services are especially vital for babies, toddlers, and their caregivers, who should be able to reach them on foot.

People near car-free places (f)

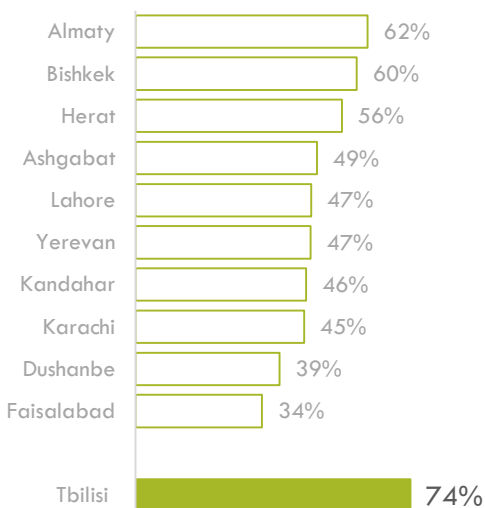
(Share of population) vs. highest 10 cities in Central and West Asia (2020) (ITDP)



(f) Percentage of the city's population that lives within 100m of a car-free place. These car-free places include pedestrian-only alleyways, nature trails, playgrounds, pedestrianized squares, and anywhere else that is not used by cars and trucks (except, in some cases, emergency vehicles).

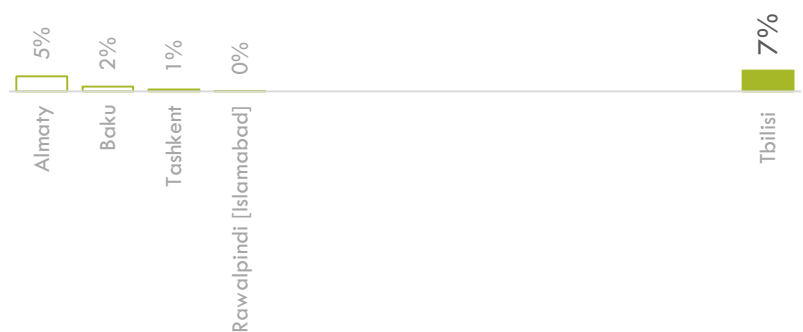
People near open public space

(Share of population) vs. highest 10 cities in Central and West Asia (2020) (UN Habitat)



People near protected bikelanes

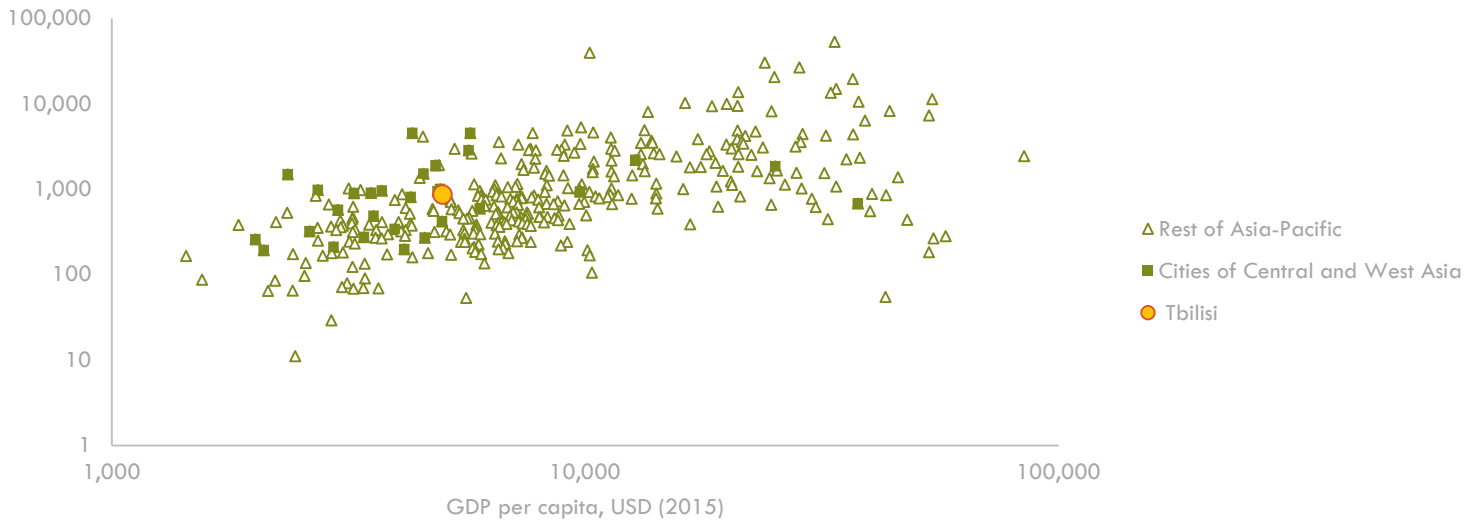
(Share of population) vs. highest 10 cities in Central and West Asia (2020) (ITDP)



Transport externalities

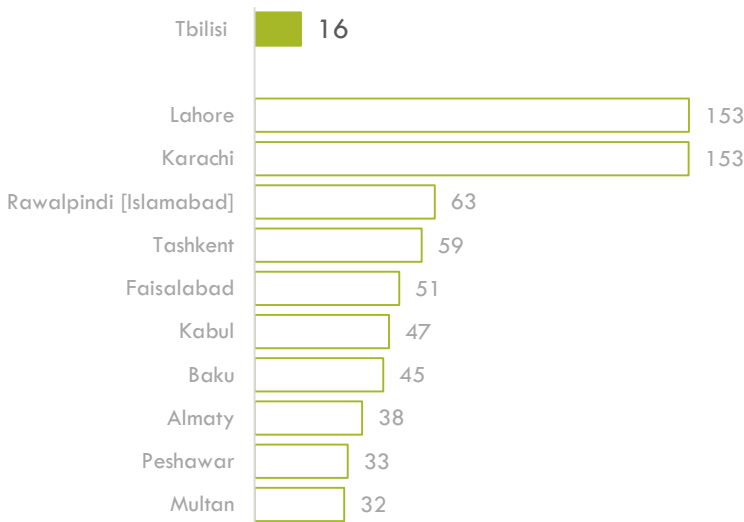
Road transport - CO2 emissions

Thousand tonnes (2022) (ClimateTrace)



Road transport - N2O emissions

Tonnes (2022) vs. highest 10 cities in Central and West Asia (ClimateTrace)



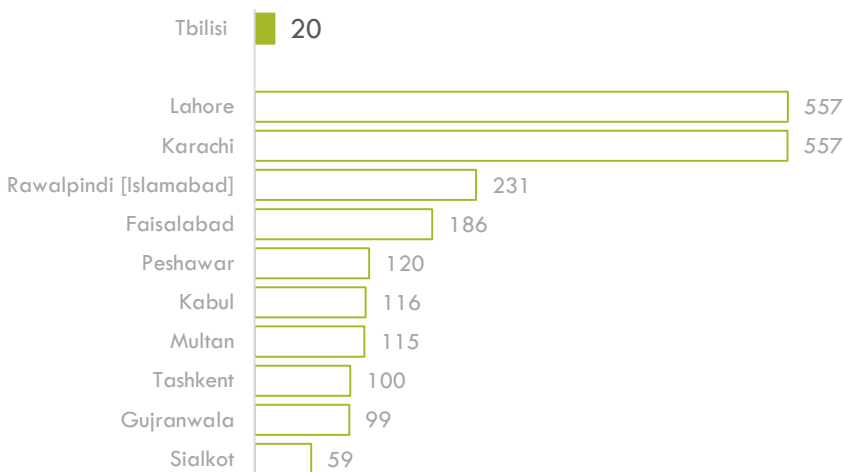
Population exposure to disasters

Share of population (2015) (GHS)



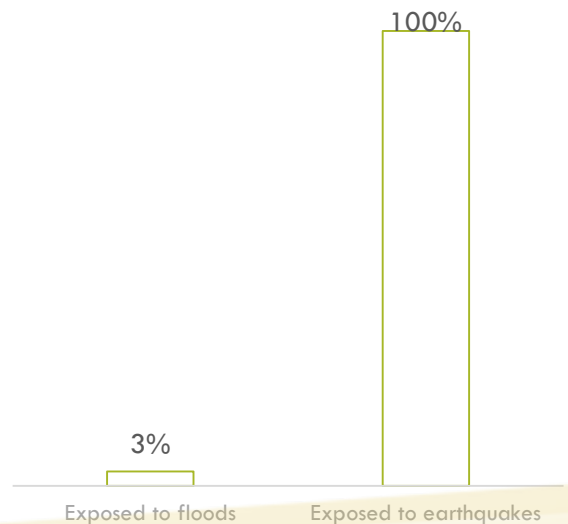
Road transport - CH4 emissions

Tonnes (2022) vs. highest 10 cities in Central and West Asia (ClimateTrace)



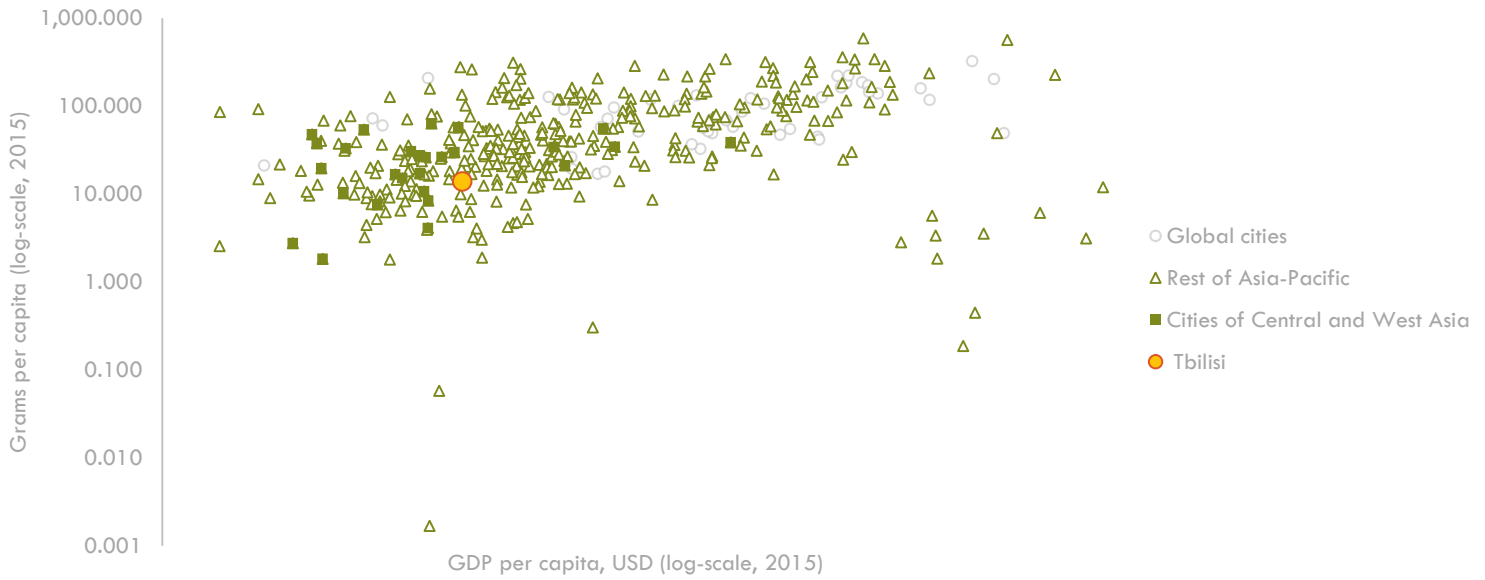
Urban built-up area exposure to disasters

Share of urban area (2020) (GHS)



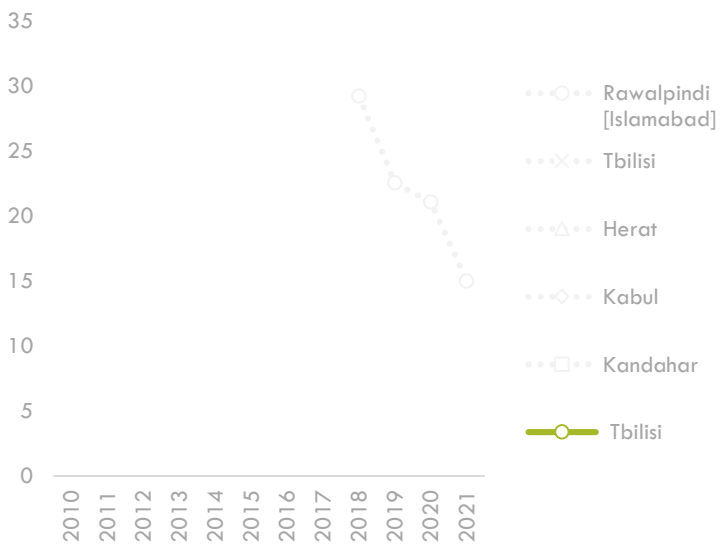
Transport PM 2.5 emissions

(GHS)



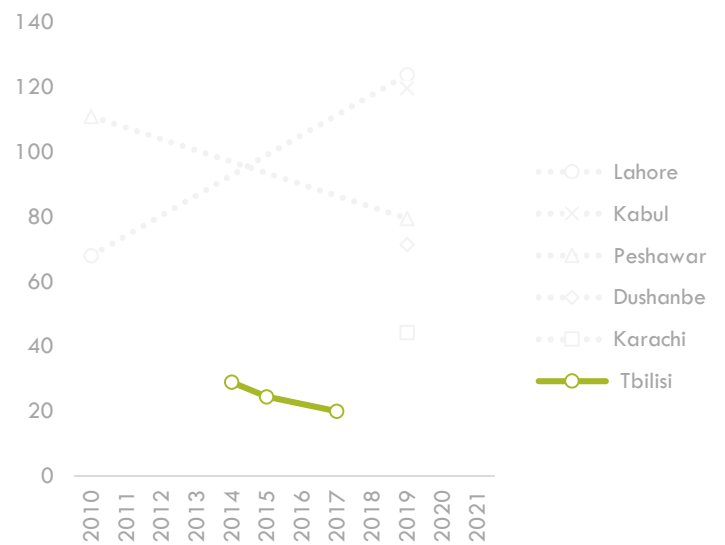
NO2 concentration

ug/m3 (vs. highest 5 cities in Central and West Asia) (WHO)



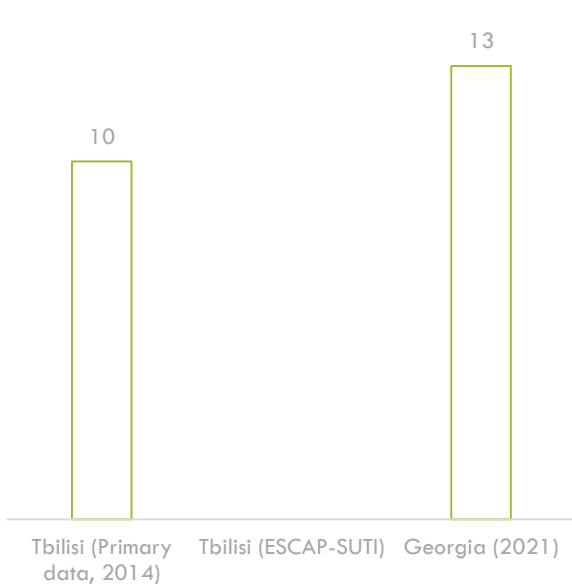
PM 2.5 concentration

ug/m3 (vs. highest 5 cities in Central and West Asia) (WHO)



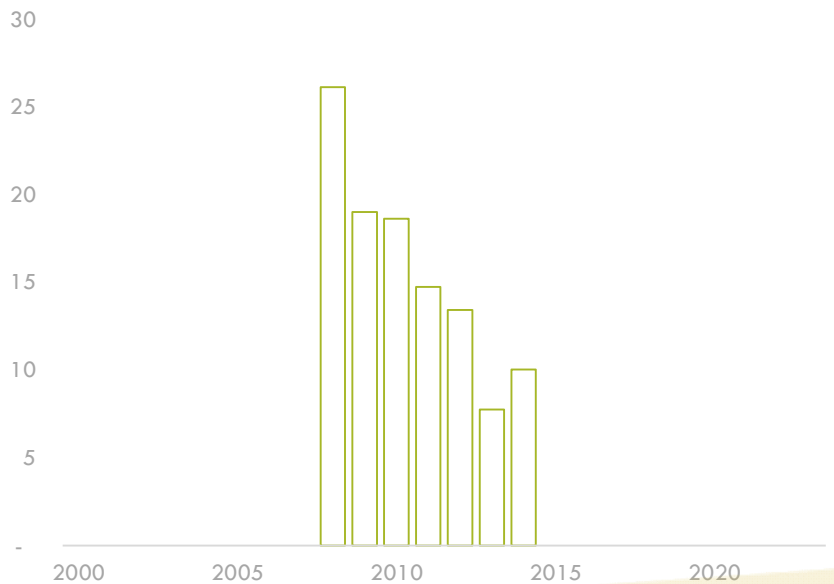
Road crash fatality rate

Deaths per 100,000 population



Road crash fatality rate

Deaths per 100,000 population (Primary data)



Transport related Indices

Container port performance index

Index is resultant of the sum of a weighted average of indices for each of the five vessel sizes: feeders (<1,500 TEUs), intra-regional (1,500–5,000 TEUs), intermediate (5,000–8,500 TEUs), neo-Panamax (8,500–13,500 TEUs), and ultra-large container carriers (>13,500 TEU)

Tbilisi n.d.

Critical Infrastructures Spatial Index for the transportation sector

CISI is an index that spatially explicit indicates the coverage or lack of transport infrastructure. The CISI is expressed in a dimensionless value ranging between 0 (no CI intensity) and 1 (highest CI intensity). The index aggregates high resolution geospatial information on multiple CI assets per CI system

Tbilisi 0.04/1.00
(2020) (GHS)

SUTI Geometric Mean

The geometric mean in the Sustainable Urban Transport Index (SUTI) by UNESCAP is a mathematical approach to aggregate scores across its 10 sub-indicators, including public transport ridership, safety, affordability, air quality, and access to transport

Tbilisi n.d.

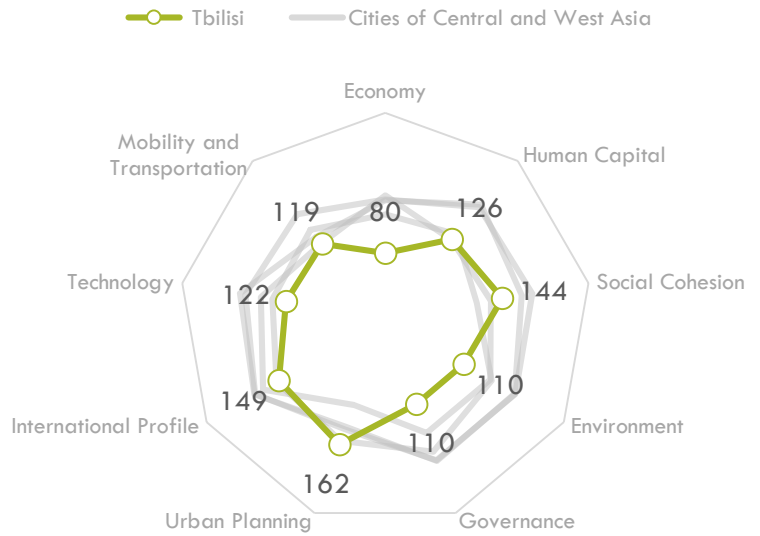
Cities in Motion index ranking

The Cities in Motion Index (CIMI) is a composite indicator evaluating cities across nine dimensions—governance, urban planning, technology, environment, international profile, social cohesion, human capital, mobility, and economy—focusing on sustainability and quality of life. It uses a weighted aggregation model to combine sub-indicators for a holistic assessment of urban performance

Tbilisi 110th out of 183 cities
(2024) (IESE)

Cities in Motion index ranking by subcomponent

Ranking (vs. other Cities of Central and West Asia) (2024) (IESE)



Transport relevant policy documents

| Year published | Document name |
|----------------|--------------------------|
| 2017 | Tbilisi City Master Plan |

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